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VOLUME 3

THE INFANTRY SECTION AND PLATOON IN BATTLE

(BILINGUAL)

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B\C

FOREWORD

1.   B-GL-309-003/FT-001, The Infantry Section and Platoon in Battle, is issued on authority of the Chief of the Defence Staff.

2.   This publication is effective upon receipt and supersedes B-GL-309-003/FT-001, Infantry, Volume 3, Section and Platoon in Battle dated 9 September 1976.

3.   This publication is the basic reference for the organization, tactics and administration of the infantry section and platoon in battle. It is based on B-GL-309-001 /FT-001, The Infantry Battalion in Battle, 31 March 1992.

4.   Much of the content of this revised manual is different from its predecessor. Most significantly, the command and control philosophy herein has been rewritten to incorporate the latest developments in army doctrine. As well, much of the content of this manual has been categorized into techniques, procedures and drills. The procedures and drills are meant to be prescriptive. This is necessary to ensure a common standard in a Total Force army.

5.   It is envisaged that this manual become the Keystone infantry publication and that it be, revised frequently to incorporate new drills, techniques and procedures. This process will be made easier by use of the Army wide Automated Network for comments and possibly for amendments.

6.   Any gender references in this publication are considered to have both masculine and feminine meanings.

7.   Comments and suggestions for changes may be forwarded through normal channels to Land Force Command Headquarters, Attention: G3 Infantry. Use of ADP electronic means is encouraged.

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CHAPTER 1

INTRODUCTION

"The platoon is, for all purposes, the unit for whose perfection we strive. Because, a perfect platoon means a perfect battalion and brigade or division: and the efficiency of any army corps is to be measured by that of its platoons."

MGen Sir John Monash

AIM

1.   The aim of this publication is to detail the organization and the tactical employment of the infantry rifle section and platoon in battle.

SCOPE

2.   This publication is intended for rifle section and platoon commanders in infantry battalions. It situates the infantry platoon within the context of the battalion in battle and outlines its tactics, techniques, and procedures in all operations of war. This publication does not detail the employment of the section and platoon in operations other than war. However, the contents of this publications are as applicable on such operations as they are in war and must be accepted as the basic fundamentals which must be mastered before more specific-to-mission training occurs.

3.   The following publications may be consulted for information relative to the section and platoon in battle:

a. B-GL-300-000/FP-000 The Army,

b. ATP 35(A) Land Force Tactical Doctrine,

c. B-GL-301-001 /FP-001 Land Formations in Battle,

    d. B-GL-301-002/FP-001 The Battle Group in Operations,

    e. B-GL-301-002/FP-201 Combat Team Commander's Handbook,

    f. B-GL-301-003/FP-001 Peacekeeping Operations,

    g. B-GL-302-006/FT-001 Soldier's Guide to FIBUA,

    h. A-OL-302-008/FT-002 Aid of the Civil Power – Tactical Operations,

    i. B-GL-302-01 1 /FT-001 Airmobile Operations,

    j. B-GL-309-001 /FT-001 Infantry Battalion in Battle,

    k. B-GL-309-004/FT-001 Patrolling,

    l. B-GL-309-005/FT-001, Sniping,

    m. B-GS-316-013/FP-001 NBCD Volume 13 – Individual Procedures,

    n. B-GS-316-014/FP-001 NBCD Volume 14 - Formation and Unit Procedures, and

    o. B-GL-318-001 /PT-001 Fieldcraft.

DEFINITIONS

4.   Definitions and terms used in this manual are in accordance with B-GL-303-002/JX-Z03 Army Vocabulary and AAP-6 (Canadian Version).

TYPES OF OPERATIONS

5.   The following types of operations are covered in this manual:

   a.   the offence, including the attack and the pursuit,

   b.   the defence,

   c.   the delaying operation, and

   d.   transitional stages in operations:

      (1) advance to contact,

      (2) meeting engagement,

      (3) link-up,

      (4) withdrawal, and

      (5) relief in place.

TACTICS, TECHNIQUES, DRILLS AND PROCEDURES

6.   This manual focuses on standard **techniques, procedures and drills** used on operations. These should compliment unit SOPs and established company or combat team drills. They are not tactics. These terms are defined as follows:

   a.   Techniques. Techniques are the general and detailed METHODS used by troops or commanders to perform assigned missions (i.e., platoon movement techniques and formations). They describe A WAY, not the only way, of doing something.

   b.   Procedures. A procedure is a standard detailed COURSE OF ACTION that describes how to perform a task (i.e., battle procedure). Procedures prescribe THE WAY of accomplishing tasks.

c.   Drills. Drills are small unit standard procedures essential for building strong, aggressive units (i.e., battle drills). They provide standardized actions that link the efforts of soldiers to a common purpose.

7.   Knowledge of these techniques, drills and procedures should not be equated with tactical skill. Tactics are intuitive abilities acquired over time on operations. Good tactics require of commanders an innate ability to quickly understand relationships between time, ground, forces and weapons available and the purpose of their mission. It must be stressed that before tactical ability can be acquired platoon and section commanders must first master the following:

a. battle procedure,

b. tactical movement techniques,

c. application of weapons fire to ground,

d. fire control,

e. fieldcraft and battle techniques and drills,

f. appreciation and use of terrain,

g. selection and construction of fire positions, and

h. concealment.

8.   To ensure unity of doctrine throughout the Total Force, the techniques, procedures and drills presented in this publication should form the basis for lesson plans and exercise standards for the instruction of all Canadian Infantry commanders. Reserve component commanders will be expected to have detailed knowledge of all the dismounted (light) infantry material within. Regular Force commanders will be expected to have comprehensive knowledge of both the dismounted and mechanized techniques, procedures and drills described.

9.   **Tactics is the art dedicated to the destruction of the enemy's combat power through the best use of troops, weapons, ground and time available.** It takes into account the composition of the force, the ground, the strength and disposition of the enemy and his likely reactions to friendly forces moves. Tactics requires an ability to foresee the results of actions taken, to read the battle and determine how and when the initiative can be seized from the enemy, and kept until the enemy is destroyed or neutralized. Sound tactics make maximum use of the following principles:

a.   **Surprise** through deception, concealment and speed to throw the enemy off balance.

b.   **Offensive action** to seize and keep the initiative, keeping the enemy reacting to friendly forces moves.

c.   **Concentration of force** through the coordination of weapons fire and tactical manoeuvre to hit an enemy when and where he is weakest.

d.   **Flexibility** through the retention of balanced forces and reserves to exploit success or to deal with the unexpected.

10.   Tactics are part flair and part knowledge, which after study and practice, add up to experience and confidence. They require that all commanders master the techniques presented in this manual; and that they employ these techniques in simple, aggressive plans which make maximum use of the principles outlined above. By these means leaders at all levels should strive to develop a tactical ability in themselves and in their subordinates.

COMMAND PHILOSOPHY

11.   The Canadian Army's philosophy of command and control was formulated to enable units, sub-units and small units to function better and faster than the enemy.

12.   The philosophy is based on the principle of decentralized command and comprises both the procedural aspects of command and control and the human dimensions of leadership. It incorporates the idea of a more traditional positive centralized control, realizing that at times subordinates must be closely controlled through the use of detailed orders and multiple control measures. However, the central idea of decentralized command is that subordinate leaders should normally be allowed considerable latitude in accomplishing the mission. It promotes the maximum use of initiative and the decentralized execution of tasks. The essential elements of decentralized command are:

   a. mission orders,

   b. commander's intent,

   c. initiative,

   d. command presence, and

   e. trust, respect and cohesion.

13.   Mission Orders. Mission orders are orders that give a subordinate a task and a purpose to accomplish without specifying how the task must be done.

14.   Mission orders focus on results, not on techniques, procedures and drills. Instead of concentrating on lengthy descriptions about how subordinates should carry out a task, mission orders specify the result required, and leave the means of achieving this result to the subordinate. **The result is the purpose behind a mission or task.** This purpose is called "the commander's intent".

15.   A platoon commander will receive tasks from his company commander, the "what" of the mission, but also he will receive the "why" of the mission (the purpose or intent). This is what the company and battalion commanders intend for the assigned task to accomplish.

16.   The "what, when, and where" are all flexible because it is the "why" (the result) that is important. If during the operation the subordinate commander sees that the original task assigned will no longer achieve the commander's intent, he must take the initiative and do something that will. He reports his actions as soon as possible, but he does not wait for permission.

17.   Mission orders differ from detailed orders in that they avoid giving detailed coordinating instructions and control measures, and because they emphasize that the accomplishment of the commander's intent is more important than achieving the task. This type of orders may not always be possible or desirable, particularly when the requirement for detailed coordination necessitates positive control. However, whenever possible, mission orders should be practiced.

18.   <u>Commander's Intent</u>. The result desired by a commander, the "why" of his mission, is expressed as the commander's intent. Intent is that condition or situation to be achieved by the mission. The condition or situation could relate to the enemy (i.e., to destroy...), the posture of the friendly forces (to guard...), terrain (to defend...), a friendly situation for subsequent operations (to cover...), or anything else the commander wants to produce by the unit's operation. **It is in effect the "end state" the commander envisions.**

19.   The battalion or company commanders' intent should be expressed as part of the friendly forces paragraph of platoon orders (para 1 b.); while the platoon commander's intent should be clearly expressed as either:

   a.   <u>A mission statement</u>. A mission is a task with **a purpose.** The purpose must be clearly defined, e.g., "To defend left forward **in order to fix and kill elements of the enemy lead battalion in Killing Zone F and prevent his further advance through approach A.";** or as

b. <u>The opening statement in the concept of operations paragraph</u>. For example:

   (1) Mission. "To defend left forward..."

   (2) Execution.

      (a) Concept of ops. I want to destroy all enemy (at least one enemy company) attempting to move through approach A or attempting to capture this left forward position. We must prevent penetration through this ground in order to fix the enemy in killing zone F so that B Squadron can carry out their counter-attack from the right and destroy the enemy's lead battalion ….

20.   <u>Initiative</u>. Initiative is derived from mission orders and the commander's intent. Together they define the freedom of action a unit has been given in the context of the desired result. Commanders at all levels use the procedure of mission analysis (see chapter 3) to ensure they understand exactly how their assigned task relates to the higher commander's intent and to clarify the exact scope they have for freedom of action.

21.   Once the intent of a task is clearly understood, platoon and section commanders have a responsibility to take the initiative to act in accordance with the demands of the situation without waiting for orders, to produce the results required.

22.   Higher commanders should encourage the use of initiative by providing clear statements of intent, by limiting the control measures assigned, and by intervening in the execution of tasks only if the failure of a subordinate to accomplish a task endangers the overall mission.

23.   <u>Command Presence</u>. Once a commander has passed on his orders he must position himself to influence the most important task (the main effort) with his personal presence and leadership.

24.   Leadership is the critical element in combat. It is most effective when it is face to face, and the most powerful leadership is personal example. This will require that platoon and section commanders lead from the front. Only by being well forward can a commander determine where and when his personal presence is required to either show example or, when circumstances change, to react with initiative and modify the execution of a task.

25.   Forward command does not mean that a commander should get wrapped up in the soldier's fight. He must at all times distance himself mentally to read the battle, to anticipate the next event and to seize opportunities as they unfold.

26.   <u>Trust, Respect and Cohesion</u>. For decentralized command to work, there must be explicit trust up and down the chain of command and laterally within the unit. There are several dimensions to this trust.

  a. **Leaders must trust and respect their soldiers.** Directive control demands commanders who are capable of letting go and allowing subordinates to use their own initiative. This may mean that **a commander must live with a degree of uncertainty and the expectation that subordinates will sometimes make mistakes.** These will diminish with time and should not deter commanders from pushing decision thresholds down to the lowest levels as much as possible.

  b. **Subordinates must be worthy of trust and respect.** A subordinate combat leader must be capable of taking the initiative. He must be loyal and aggressively dedicated to accomplishing the spirit of his mission (the commander's intent) as well as the task. He must have the ability and discipline to work without close supervision, and strive in these conditions to achieve the best results and not the minimum standard prescribed.

c. **Subordinates must trust and respect leaders.** In order for soldiers to work wholeheartedly to support orders, they must be convinced of the competence and good intentions of the chain of command above them. The section and platoon commander are the most important part in this chain. Lack of competence at their level will be immediately recognized. For this reason these commanders must have mastery of the techniques outlined in this manual and of unit SOPs. As well, they must have an ability to adapt to changing circumstances by using initiative and sound tactical sense. Above all these commanders must be manifestly loyal to the higher commander's intent and demonstrate this to their subordinates by remaining aggressively dedicated to high standards in the pursuit of results.

27.   Trust and respect are critical to decentralized command. They promote cohesion. They are enhanced by the retention of individuals for long tours with the same section or platoon, and by the establishment of common techniques, procedures, drills and tactics.

28.   The process of selection and training of leaders must focus on the character qualities of determination and initiative. There is no place in the infantry platoon for unthinking commanders who lack the ability or desire to pursue the highest standards in the execution of their tasks.

LEADERSHIP

29. The outcome of most battles depends upon leadership, notably the leadership of platoon and section commanders. The leader in battle has to make things happen, where otherwise there would be inertia of a highly dangerous and contagious kind. Field Marshal Lord Slim summed this up when he stated:

> "When times are bad ...there will come a sudden
> pause when your men stop and look at you. No one
> will speak; they will just look at you and expect
> leadership. Their courage

is ebbing; you must force it to flow back and it is
not easy. You will never have felt more alone in
your life."

30.　　The foundation of leadership in war should be laid long before operations begin. The leader who has trained his men well and imposed the stamp of his character upon them, will be well rewarded with their trust and their confidence in his leadership under all conditions. However, to lead well in war, a leader must, through reading and experience, develop a feeling for the environment of war, and cultivate the definite qualities of character required in this environment.

31.　　<u>The Environment of War</u>. Men will be optimistic, but somewhat naive, before their first action. They will always be nervous, and will need to talk amongst friends, to try to reassure each other, to talk about how things might go and how they will do.

32.　　On first contact with the realities of battle men will react to the experience profoundly. Often there will be first fears and even bewilderment during those black moments when, from an individual perspective, the whole thing seems to be going terribly wrong and the awful possibility of failure and death hangs over the whole enterprise. These feelings will change, improve or get worse, with the influence of leadership.

33.　　Strong, determined leadership will reduce the effects of first shock and inertia. Weak and inconsistent leadership will add to the fears and bewilderment, and even jeopardize the effectiveness of the unit.

34.　　Once operations commence, leadership must learn to function in the environment of fear. Furthermore, leadership will have to work through the following conditions:

　　a.　**Chaos.** Leaders must expect misfortune and adversity as the normal currency of things, even when an operation may actually be succeeding in its aim. Despite excellent training,

preparation and orders, leaders should not be daunted if chaos reigns in battle. It undoubtedly will.

b. **Friction.** Do not expect precision in war. Stupidities multiply, often as a result of a simple mistake such as in navigation, in an atmosphere in which the simplest things prove difficult, and the difficulties accumulate, setting up friction. Such things as map reading, ammunition resupply and casualty evacuation are apparently simple processes. However they can be enormously difficult, and if they do not work, they are potentially devastating to tactical progress.

c. **Uncertainty, Loneliness and Comradeship.** For the individual in war, the atmosphere of uncertainty is all pervading. He will feel death to be impersonal, commonplace and wasteful. The machinery of war, and the immensity of the undertaking makes him feel small and vulnerable to the whims of fate. In this atmosphere of uncertainty and loneliness the tiny fraternity of comrades with whom each soldier identifies himself, in terms of his self-respect and needs, becomes more important. Leaders at all levels must remain aware of the importance of this small group, promote its cohesion and collective wellbeing.

d. **Fatigue.** It is imperative that soldiers have fortitude in resisting hardship, discomfort, and fatigue. War is immensely tiring, and the leader has for ever to be balancing in his mind the fatigue of his men, against the tactical imperatives that lie ahead. Stress will visit every man, and although not covered in detail in this manual, the leader would be wise to learn to recognize and counter its effects.

35. Qualities of Leadership. The environment of combat puts great demands on leaders. To prepare adequately for these demands it will not be enough to simply master the techniques of this manual.

36. Leaders must demonstrate sound qualities of leadership. **Above all else is the quality of mental and physical robustness to the shocks**

of war. The man who can consistently remain cool, calm and rational in the face of death is the man who will be turned to and admired the most. This presence of mind must be cultivated by commanders in peacetime.

37.   Other necessary qualities include:

   a.   **Courage.** Courage is indivisible from leadership. Leaders must be prepared to do more than is asked of them, to act always, regardless of their own fears, and to show by example what must be done. Much on the battlefield is indeed decided by example, by men who make things happen that might not otherwise happen.

   b.   **Extreme Determination.** One of the greatest problems for a commander is to train his subordinates to strive for perfection. It requires the example of fierce determination and forcefulness. Subordinates may be loyal, but without a fostered spirit of extreme determination, they may not be sufficiently self disciplined to see a task through to its proper finish. **Mission orders** demand that this self discipline becomes highly developed in all levels of command, and that leaders are unswerving in the execution of decisions made.

   c.   **Force of Will.** It is the ultimate aim of battle to "kill the enemy's courage" by killing his will to fight. Battles are won and lost in the hearts of men; those with the more resilient force of will are going to win. In decentralized command, where junior commanders are given greater freedom of action, leaders must demonstrate this 'will to win' and foster its development in their sections and platoons through demanding training where willpower is challenged.

   d.   **Boldness and Caution**. There are times in battle when caution and thought is required, and moments when supreme boldness is the key to success. Judging these moments right is one of the most difficult yet important skills for a commander to try to develop. This is the reality of winning the firefight , and of

exploiting that fire. Commanders must come to learn that the shock effect of fire has to be followed up at once with bold offensive action, or its impact is lost, and caution must prevail.

38.   The qualities above are aggressive. They must not, however, lead to the belief that commanders should be unthinkingly stubborn or blinded to innovation. The uniqueness of every situation, requiring unique solutions, must also be recognized. The Army's command philosophy demands of all leaders the qualities of initiative and innovation to formulate plans in the absence detailed orders which will best produce the desired results. Mental inflexibility and the inability to see beyond basic aggressive techniques, drills and procedures is dangerous to infantry leadership.

39.   To sum up, robustness, courage, undaunted determination and highly developed initiative are the qualities necessary of leaders in infantry sections and platoons.

CHAPTER 2

ORGANIZATION

INTRODUCTION

1.   Every member of the platoon must understand the organization of the infantry battalion and know what help to expect from the battalion support weapons. Platoon and section commanders must have a more detailed knowledge so that they can use this support intelligently and efficiently.

2.   An infantry battalion comprises:

   a. a battalion headquarters (HQ),

   b. an administrative company,

   c. a combat support company, and

   d. four rifle companies.

3.   A line diagram of the infantry battalion is at Figure 2-1, keeping in mind that battalion strength and organization changes with specific missions.

BATTALION HEADQUARTERS

4.   **Role and Organization.** The role of battalion HQ is to provide the Commanding Officer with the facilities to command and administer his battalion and any attached support.

5.   The battalion HQ provides the Commanding Officer with the necessary personnel, vehicles, communications and information to

enable him to command and control the unit in battle. It comprises the following elements:

a. **Command Section.** It comprises the Commanding Officer (CO), the Deputy Commanding Officer (DCO) and the Regimental Sergeant-Major (RSM) with their dedicated drivers and communicators.

b. **Command Post section.** It is the focal point for the planning, control and coordination of unit operations. The principal staff comprises the Operations Officer (Ops 0), the Intelligence Officer (10), and a number of duty officers drawn from the combat support company.

c. **Signal Platoon.** It is responsible for providing, planning and setting up radio and telephone communications for the battalion and attached supporting arms. It provides technical supervision over all battalion communications.

d. **Intelligence Section.** It is responsible for receiving, collating and analyzing information obtained from all battalion and supporting sources and communicating the resulting intelligence to the companies, flanking units and the formation headquarters.
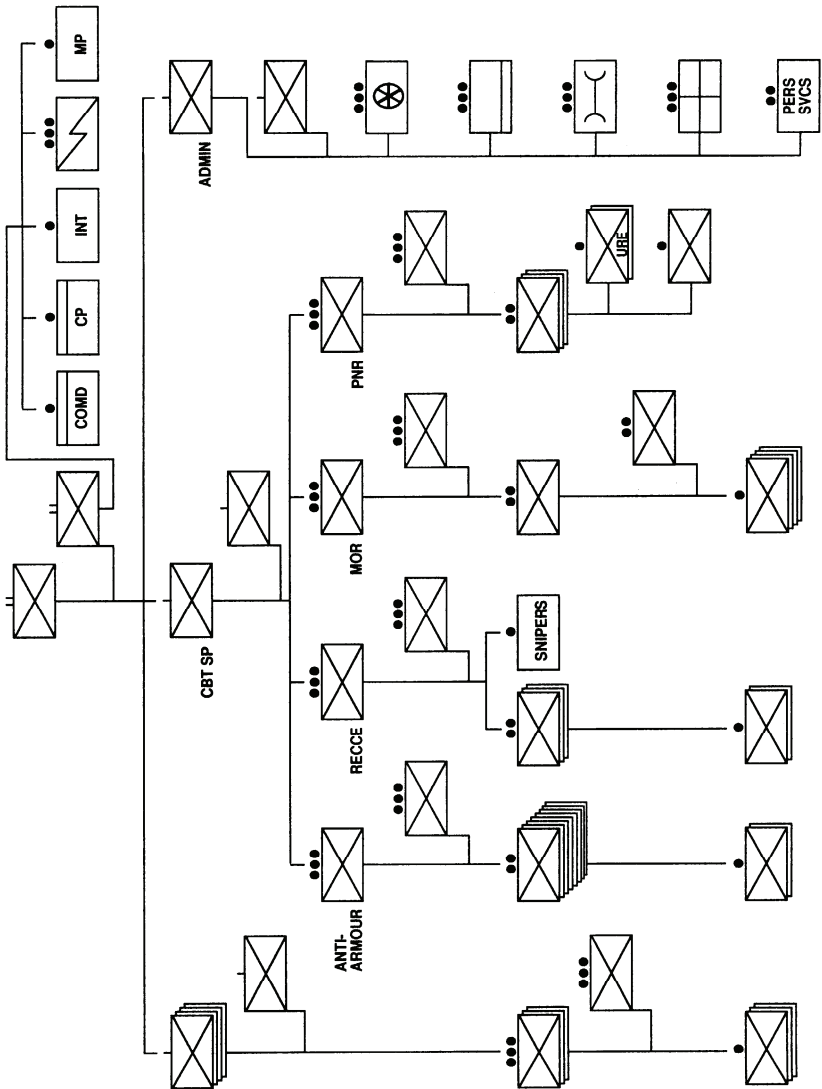
Figure 2-1 Organization of an Infantry Battalion.

e. **Military Police Section.** The tasks of this section are to:

(1) provide route reconnaissance, signing, and traffic control,

(2) protect the battalion headquarters,

(3) take part in the headquarters reconnaissance party,

(4) control traffic within battalion headquarters, and

(5) control of prisoners of war in the unit area.

ADMINISTRATION COMPANY

6.   **Role and Organization.** The administration company provides administrative support to the battalion.

7.   The Officer Commanding Administration Company commands A echelon, working under the general direction of the battalion second in command. The administration company comprises a company HQ, a supply platoon, a transport platoon, a maintenance platoon, a medical platoon, a personnel services section and a ration platoon.

8.   Company HQ. The company HQ provides coordination, command and control of the company.

9.   Supply Platoon. It provides the immediate logistic support necessary to keep the battalion in action.

10.   Transport Platoon. It provides transportation facilities for the battalion.

11.   Maintenance Platoon. It provides unit first line maintenance and repair of all weapons, vehicles and equipment (less radios and telephones) and assist in the recovery of all vehicles and equipment.

12.   Medical Platoon. It collects, sorts, treats and prepares casualties for evacuation.

13.   **Personnel Section.** It keeps personnel records, initiate records action and process all non-operational correspondence.

14.   **Ration Platoon.** It feeds the battalion with fresh rations whenever the operational situation permits.

15.   Details of organization and employment of these sub-units are explained in B-GL-309-001 /FT-001.

COMBAT SUPPORT COMPANY

16.   **Role and Organization.** Combat Support Company provides combat support to the battalion combat teams and company groups. Hence, combat support company does not operate as an autonomous sub-unit in the field.

17.   It comprises a HQ and the following platoons:

a. reconnaissance,

b. mortar,

c. antiarmour, and

d. assault pioneer.

18.   **Reconnaissance Platoon.** It comprises a HQ, three patrol sections of two detachments, and a sniper section. The platoon acts as the main intelligence gathering agency of the battalion and is deployed and tasked by the Commanding Officer. B-GL-309-004/FT-001 and B-GL-309-005/FT-001 provide details.

19.   **Mortar Platoon.** It comprises a HQ and two groups of four mortars. The platoon command post is the Fire Support Coordination Centre (FSCC) in the battalion command post (CP) complex. The platoon provides the Commanding Officer with organic indirect fire support.

20.	**Antiarmour Platoon.** It comprises a HQ and eight sections of two antiarmour detachments. It provides the Commanding Officer with long range, antiarmour, direct fire support and a long range surveillance capability with the TOW sight.

21.	**Assault Pioneer Platoon.** The platoon is made up of a HQ and three sections. Its role is to undertake minor engineer tasks in the battalion area. Due to its limited strength, it will usually be necessary for the rifle company, in whose area the platoon is working, to provide assistance. Tasks may include mine-laying, cratering, river reconnaissance, road repairs, nuclear, biological and chemical survey, decontamination and bridge repair.

RIFLE COMPANY

22.	The rifle company contains the soldiers who close with and destroy the enemy. It comprises a company HQ and three rifle platoons. The company can operate independently for a limited period when supplemented with administrative support. For many operational tasks, additional elements from the combat support company and other arms will be necessary.

23.	The organization of a typical infantry company is at figure 2-2.

THE RIFLE PLATOON

24.	**Role and Tasks**. The rifle platoon's primary role is close combat. It participates in a wide variety of operations, such as:

a.	the attack in all situations, conditions and geographic locations;

b.	holding ground in the defence;

c.	being part of the covering force;

d.	being part of a reserve whose task is to counter-attack or block;

e.   participation in airmobile and amphibious operations;

f.   establishment of surveillance and conduct patrols and;

g.   conduct of security tasks.

25.   **All Arms Cooperation.** A mechanized rifle platoon operates as part of a Combat Team in a Battle Group. These two organizations are defined as follows:

a.   **Combat Team.** A combat team is an operational group normally consisting of an infantry company or a tank squadron each with at least a troop or platoon of the other arm. Elements of other arms and services may be allocated according to need. The tactical employment of the Combat Team, is provided in B-GL-301-002/FP-Z01.

b.   **Battle Group.** A battle group is an operational grouping based on either an infantry battalion or armoured regiment, each with at least a squadron or company of the other arm. Elements of other arms and services may be allocated according to need. The tactical doctrine for this organization is provided in B-GL-301-002/FP-001.

26.   **Organization.** The platoon consists of a HQ, a weapons detachment and three rifle sections (Figure 2-3). Due to casualties, the platoon is seldom at strength during operations. When the strength falls below 20, the platoon commander should consider reorganizing into two rifle sections, and adjust his tactical drills accordingly.

27.   **The Platoon Commander** has the following responsibilities:

a.   to command;

b.   to have thorough knowledge of weapon characteristics, tactical techniques, drills and procedures;

c.   to train the platoon (see B-GL-050-INF/PZ-001);

d.   to maintain discipline;

e.   to know his platoon members strengths and weaknesses and acts as their counsellor when needed;

f.   to keep the platoon member physically fit and to enforce good health and hygiene;

g.   to keep his platoon well equipped and to ensure that personal equipment is correct and well maintained;

h.   to ensure his platoon vehicles and equipment are properly cleaned and maintained;

i.   to maintain a balance between work, rest and recreation;

j.   to conduct regular checks of personal and platoon equipment;

k.   to delegate powers and responsibilities to his platoon second in command (21C) and section commander; and

l.   to maintain high patrol standards.
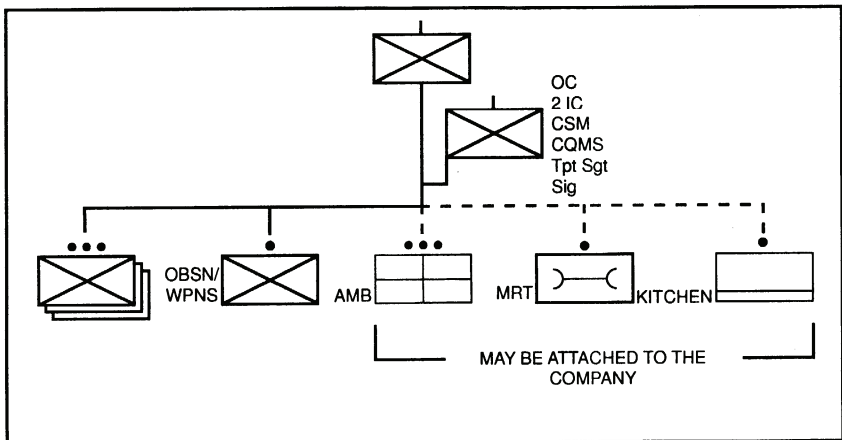
Figure 2-2 Organization of an Infantry Company.
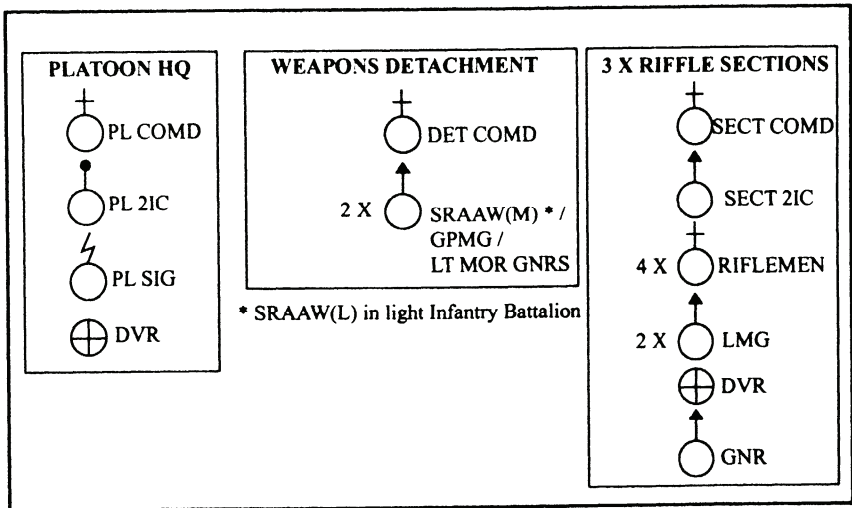
Figure 2-3 Infantry Platoon Organization.

28.   **Platoon Second in Command.** The platoon second in command (21C), a warrant officer, acts for the platoon commander and in his absence commands the platoon. The platoon second in command may travel in one of the section vehicles. He is responsible to the platoon commander for the day-to-day administration. This includes:

    a. platoon administration:

        (1)   keeping platoon roll book and duty rosters;

        (2)   collecting, distributing and redistributing ammunition, ration, water and other supplies;

        (3)   keeping high standard of discipline and dress;

(4) supervising first aid and handling of sick and wounded prior to treatment and evacuation;

(5) integrating replacements into the platoon;

(6) controlling ZULU vehicles;

(7) when fighting on foot, commanding the platoon support weapons; and

(8) organizing the gathering, detaining and movement of PWs.

b. assisting the platoon commander to fulfil his responsibilities.

29. Platoon Signaller. The platoon signaller is a rifleman who:

a. maintains and operates the platoon communications equipment;

b. controls the platoon radio net;

c. issues and controls of all codes within the platoon; and

d. remains in close proximity to the platoon commander and acts as hisbody guard.

30. **Platoon Weapons Detachment**. The platoon weapons detachment, commanded by a master-corporal, is responsible for the platoon support weapons (G PMG, SRAAW, and light mortar). It is not possible for the detachment to operate all weapons simultaneously without augmentation. During his battle procedure, the platoon commander must ensure that he deploys the most effective weapons to achieve his mission, if this has not been directed by the company commander. Members of the platoon weapons detachment may:

a. operate and maintain the SRAAW, light mortar and the machine gun;

b. conduct tank hunting and support fire tasks;

    c.   operate radios during quiet periods; and

    d.   act as platoon runner when needed.

31.   **Platoon Gunner**. The platoon gunner (the platoon commander's vehicle gunner) will (if designated):

    a.   train and supervise the section gunners;

    b.   operate and maintain his vehicle armament; and

    c.   control all vehicle mounted armament on ZULU vehicles in the absence of the platoon second in command.

32.   **Platoon and Section Drivers**. The duties of a driver are to:

    a.   drive, maintain and camouflage his vehicle;

    b.   advise the crew commander of all petrol, oil, lubricant (POL) and parts requirements;

    c.   inspect his vehicle and conduct required maintenance parades; and

    d.   under the supervision of the crew commander, conduct the crew maintenance of the vehicle.

RIFLE SECTION

33.   **The Section.** The rifle section comprises a commander, a 21C and eight soldiers including a driver and a gunner. The basic organization and equipment distribution are shown in Figure 2-4.

34.   **Section Commander.** The section commander has the following responsibilities:

    a.   commands the section;

b.   keeps the section duty roster;

c.   has thorough knowledge of platoon weapons characteristics, tactical techniques, drills and procedures;

d.   trains the section;

e.   maintains discipline, deportment and dress at a high standard;

f.   controls the distribution of ammunition, rations, water and other supplies;

g.   supervises the cleaning and maintenance of the section vehicle, radio, weapons, and other equipment;

h.   knows his section members' strengths and weaknesses;

i.   conducts regular checks of personal and section equipment;

j.   keeps his section physically fit and enforces good health and hygiene;

k.   ensures the mental well being of his soldiers; and

l.   assumes the duties of the platoon 21C if necessary.

35.   Section Second in Command 121C). The section 21C, a master corporal, has the following duties:

a.   command the section in the absence of the section commander;

b.   assist the section commander in training the section;

c.   assist the section commander in maintaining discipline within the section; and

36.   The rifle section is normally organized as two assault groups of four soldiers each, and a vehicle group of two (gunner and driver). Each assault group is further divided into two fire teams of two soldiers each (Figure 2-4). The section commander commands Assault Group 1 and the section 21C commands Assault Group 2. This is the grouping that will take out one enemy trench with either group assaulting the trench while the other group supports. This basic grouping is the easiest to command and control.

PERS (Appointment)	DVR	VEH GNR	SECT COMD	RFN	RFN	CPL / PTE	RFN	RFN	SECT 2IC	LMG GNR	LMG GNR
PERS (Rank)	CPL / PTE	CPL / PTE	SGT	CPL / PTE	CPL / PTE	CPL / PTE	CPL / PTE	CPL / PTE	MCPL	CPL / PTE	CPL / PTE
WPNS	C-7	C-7	C-7	C-7	C-7	C-7 SRAAW(H) (1)	C-7	C-7	C-7	LMG (C-9)	LMG (C-9)
AMMO	5 x 30 RD MAG; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK	5 x 30 RD MAG; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK; 2 x FLARE SIG RED; 2 x FLARE SIG GREEN	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 1 x LAW	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 1 x LAW	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK; 1 x LAW (2)	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK; 1 x LAW (2)	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK; 2 x SRAAW(H) MISSILES (1)	5 x 30 RD MAG; 100 RD BANDOLIER; 20 RDS TRACER; 2 x GREN FRAG; 2 x GREN SMK; 2 x FLARE SIG RED; 2 x FLARE SIG GREEN	200 RD BELT BOX ON WPN; 200 RD BELT ON GNR; 2 x GREN SMK	200 RD BELT BOX ON WPN; 200 RD BELT ON GNR; 2 x GREN SMK
COMMON EQPT	WIRE CUTTERS	COMPASS; WRIST WATCH; FLASHLIGHT; BINOCULARS	BINOCULARS; COMPASS; WHISTLE; FLARE PROJ; WRIST WATCH; FLASHLIGHT	WIRE CUTTERS; RADIO; ENTRENCHING TOOL	COMPASS; WRIST WATCH; ENTRENCHING TOOL; FLASHLIGHT	WIRE CUTTERS			BINOCULARS; COMPASS; WHISTLE; FLARE PROJ; FLASHLIGHT	CLEANING KIT; SPARE BARREL	CLEANING KIT; SPARE BARREL
SPECIAL EQPT	WIRE CUTTERS	COMPASS; WRIST WATCH; ENTRENCHING TOOL; FLASHLIGHT	COMPASS; WRIST WATCH; ENTRENCHING TOOL; FLASHLIGHT								

NOTE: THE MSN WILL DICTATE TYPES AND QUANTITY OF AMMO

BATTLE ORDER - AS PER BATTALION SOPs. INCLUDES NBC SUIT.

MARCHING ORDER - FIGHTING ORDER AND RUCKSACK - CONTENT OF RUCKSACK AS PER BATTALION SOPs.

NOTE (1): Mechanized Infantry only
NOTE (2): Light Infantry only

Figure 2-4 Section Organization and Equipment

2-14

37.   During an assault, the section may be engaged by an enemy from an unsuspected position. The section may then have to operate as two-member teams within each assault group. This increases the assault groups' flexibility but command and control becomes more difficult. Teams must not attempt to fight the assault battle in isolation. Closing with and destroying the enemy is a section effort. The assault groups divided into teams are shown at Figure 2-5.
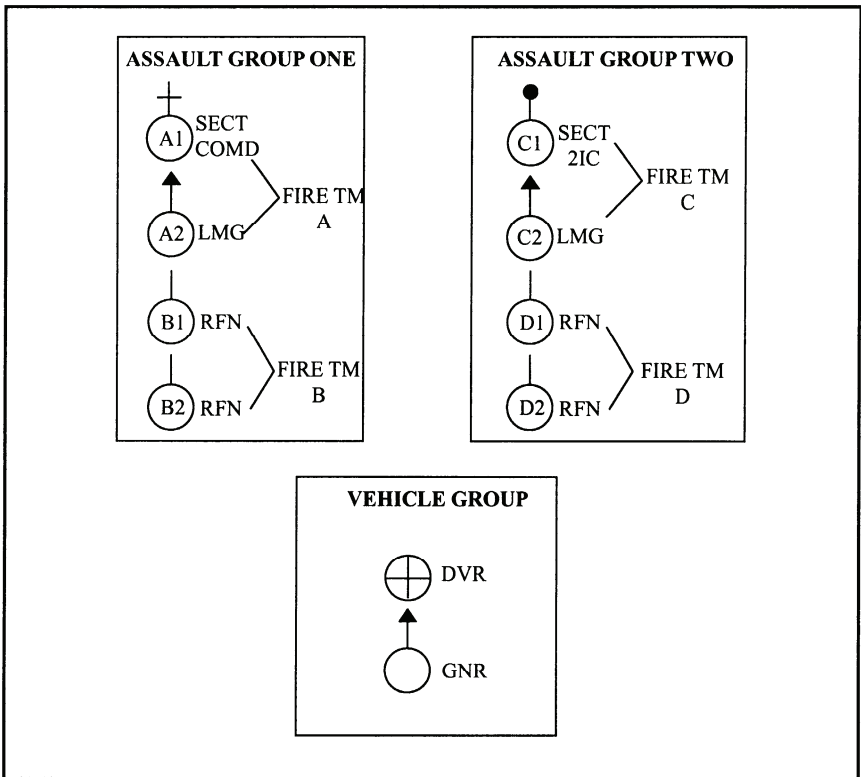
Figure 2-5 Infantry Section Organization - Assault Groups and Teams

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CHAPTER 3

COMMAND AND CONTROL

SECTION ONE

LEADERSHIP AND COMMAND

COMMAND PHILOSOPHY

1. Leadership is the personal art of influencing the behaviour of soldiers. Command is the formal exercise of authority and direction by a designated commander. The two functions are different. Skill at both is required in all Infantry commanders.

2. Realizing this, the Canadian Army has adopted a philosophy of command which incorporates both the procedural aspects of command and control and the human dimensions of leadership.

3. The philosophy is **one of *decentralized command***. The central idea of decentralized command is that subordinate leaders should normally be allowed considerable latitude in accomplishing the mission. It promotes the maximum use of initiative and the decentralized execution of tasks.

4. Decentralized command presupposes that trained Infantry commanders, regardless of rank, possess the correct qualities of leadership needed in war. These qualities are outlined in this section.

LEADERSHIP

5. The outcome of most battles depends upon leadership, notably the leadership of platoon and section commanders. The leader in battle has to make things happen, otherwise there *will* be inertia of a highly dangerous and contagious kind. Field Marshal Lord Slim summed this up when he stated:

> "When times are bad ...there will come a sudden pause when your men stop and look at you. No one will speak; they will just look at you and expect leadership. Their courage is ebbing; you must force it to flow back and it is not easy. You will never have felt more alone in your life."

6.   The foundation of leadership in war should be laid long before operations begin. The commander who has trained and led his men well and imposed the stamp of his character upon them, will be well rewarded with their trust and their confidence in his leadership under all conditions. But to develop good battle leadership is not easy. To lead well in war, a commander must in times of peace try to develop a feeling for the environment of war, and to cultivate the definite qualities of character required in this environment.

7.   <u>The Environment of War</u>. Men will be optimistic, but somewhat naive, before their first action. They will always be nervous, and will need to talk amongst friends, to try to reassure each other. On first contact with the harsh realities of battle men will react to the experience profoundly. Often there will be first fears and even bewilderment during those black moments when, from an individual perspective, the whole thing seems to be going terribly wrong and the awful possibility of failure and death hangs over the whole enterprise. These feelings will change, improve or get worse, with the influence of leadership. Strong, determined leadership will reduce the effects of first shock and inertia. Weak and inconsistent leadership will add to the fears and bewilderment, and even jeopardize the effectiveness of the unit.

8.   Once operations commence, leadership must learn to function in the environment of fear. Furthermore, leadership will have to work through the following conditions:

a.   **Chaos.** Leaders must expect misfortune and adversity as the normal currency of things, even when an operation may actually be succeeding in its aim. Despite excellent training, preparation and orders, leaders should not be daunted if chaos

reigns in battle. It undoubtedly will. Leaders must learn to make decisions and to act decisively even though uncertainty and chaos make caution appealing.

b. **Friction**. Do not expect precision in war. Stupidities multiply, often as a result of a simple mistake, such as in navigation, in an atmosphere in which the simplest things prove difficult, and the difficulties accumulate, causing friction. Such things as map reading, ammunition resupply and casualty evacuation are apparently simple processes; but they can be enormously difficult, and if they do not work, potentially devastating to tactical progress. Friction caused by accumulated errors must be expected and planned for.

C. **Uncertainty.** Loneliness and Comradeship. For the individual in war, the atmosphere of uncertainty is all pervading. He will feel death to be impersonal, commonplace and wasteful. The machinery of war, and the immensity of the undertaking makes him feel small and vulnerable to the whims of fate. In this atmosphere of uncertainty and loneliness, the tiny fraternity of comrades with whom each soldier identifies himself, in terms of his self-respect and needs, becomes more important. Leaders at all levels must remain aware of the importance of this small group, promote its cohesion and collective well being.

d. **Fatigue**. It is imperative that soldiers have fortitude in resisting hardship, discomfort, and fatigue. War is immensely tiring, and the leader must continue to balance in his mind the fatigue of his men against the tactical imperatives that lie ahead. **Stress will visit every man, and although not covered in detail in this manual, the leader would be wise to learn to recognize and counter its effects.**

9. **Qualities of Leadership**. The environment of combat puts great demands on leaders. To prepare adequately for these demands it will not be enough to simply master the techniques of this manual. Leaders must also develop and demonstrate sound qualities of leadership.

Above all is the quality of mental and physical robustness to the shocks of war. The man who can consistently remain cool, calm and rational in the face of death is the man who will be turned to and admired the most. This presence of mind must be cultivated by commanders in peacetime. Other necessary qualities include:

a. **Courage**. Courage is indivisible from leadership. Leaders must be prepared to do more than is asked of them; to act always, regardless of their own fears; and to show by example what must be done. Much on the battlefield is indeed decided by example, by men who make things happen that might not otherwise happen.

b. **Extreme Determination.** One of the greatest problems for a commander is to train his subordinates to strive for perfection. It requires the example of fierce determination and forcefulness. Subordinates may be loyal, but without a fostered spirit of extreme determination, they may not be sufficiently self-disciplined to see a task through to its proper finish. Decentralized command demands that this selfdiscipline becomes highly developed in all levels of command, and that leaders are unswerving in the execution of decisions made.

c. **Force of will**. It is the ultimate aim of battle to "kill the enemy's courage" by destroying his will to fight. Battles are won and lost in the hearts of men; those with the more resilient force of will are going to win. In decentralized command, where junior commanders are given greater freedom of action, leaders must demonstrate this "will to win" and foster its development in their sections and platoons through demanding training, where will-power is challenged.

d. **Boldness and Caution.** There are times in battle when caution and thought is required, and moments when supreme boldness is the key to success. Judging these moments right is one of the most difficult yet important skills for a leader to try to develop. This is the reality of winning the fire fight, and of

exploiting that fire. Commanders must come to learn that the shock effect of fire has to be followed up at once with bold offensive action, or its impact is lost and caution must prevail.

10.   The qualities above are aggressive. They must not, however, lead to the belief that commanders should be unthinkingly stubborn or blinded to innovation. The uniqueness of every situation, requiring unique solutions, must also be recognized. The Army's command philosophy demands of all leaders the qualities of initiative and innovation to formulate plans which will best produce the desired results in the absence detailed orders. Mental inflexibility and the inability to see beyond basic aggressive techniques, drills and procedures is dangerous to infantry leadership.

11.   To sum up, robustness, courage, determination and initiative are the qualities necessary of leaders in infantry sections and platoons.

COMMAND

12.   The Army's Command Philosophy is called decentralized command. The philosophy accommodates the traditional style of command known as centralized command and control.

13.   Centralized command is used when a leader needs to closely control his subordinates and relies on detailed orders, control measures and tight supervision. Such control is necessary for certain operations and tasks. However, the use of centralized command and control should be the exception and not the norm.

14.   Whenever possible, leaders should practice decentralized command. In contrast to centralized command, decentralized command relies on the initiative and strong leadership of subordinate leaders. All of the above qualities are essential to the success of the Army's command philosophy.

15.   The central theme of decentralized command is that units, companies, platoons and sections must function better and faster on the modern battlefield than the enemy, even though this battlefield will

be chaotic and though uncertainty abounds. Speed in executing operations is critical. To this end subordinate commanders will not often receive detailed orders, but only short fragmentary orders that define the task assigned and the higher commander's overall concept of operations.

16.   The techniques, tactics and procedures used to accomplish the assigned task will often be left to the ingenuity of the subordinate commander. He will be expected to act on his own initiative, within the parameters of the concept of operations, to achieve the result desired. The essential elements of decentralized command are:

   a. mission orders,

   b. commander's intent,

   c. initiative,

   d. command presence, and

   e. trust, respect and cohesion.

MISSION ORDERS

17.   Decentralized command stresses the use of mission orders. Mission orders are orders that give a subordinate a mission to accomplish without specifying how it must be done.

18.   Detailed orders normally give lengthy descriptions about how subordinates will carry out a task, prescribing the techniques, procedures and drills to be used. In contrast, the focus of mission orders is always on results desired, and the means used to achieve these results are not prescribed.

19.   Mission orders use a shortened orders process which emphasizes the purpose behind the task and the result envisioned. **The purpose and result are called the "commander's intent"** (described below).

20.   A platoon commander will receive a task from his company commander, this is the "what" of the mission, but also he will receive the "why" of the mission (the purpose or intent). This is the thing that the company and battalion commanders intend for the assigned task to accomplish. The "what" (the task), and especially the "when'" and the "where" (coord instructions) are all flexible. But the "why" (the intent) is not.

21 .   The intent of a mission will remain constant throughout change. If during the operation the subordinate commander sees that the original task assigned will no longer achieve the commander's intent, he must take the initiative and do something that will. He reports his actions as soon as possible, but he does not wait for permission.

22.   Mission orders differ from detailed orders in that they avoid giving detailed coordinating instructions and control measures, and because they emphasize that the accomplishment of the commander's intent is more important than achieving the task. **This type of orders may not always be possible or desirable, particularly when the requirement for detailed coordination necessitates positive control.** However, whenever possible, mission orders should be practised.

COMMANDER'S INTENT

23.   Commanders at all levels are responsible for achieving assigned missions. **A mission is a clear and concise statement of the task and its purpose.**

24.   Traditionally, using centralized command, the task assigned has been the primary consideration in accomplishing a mission. In contrast, in decentralized command it is the purpose of a mission which is more important.

25.   The purpose is the "why" of the mission, it is expressed in **the mission paragraph** and is explained in **the concept of operations paragraph.** The following apply:

a. <u>A mission</u>. Missions link the task (assigned by the higher commander) and the purpose of a mission (determined through mission analysis(see below)). e.g.,

"Mission. To defend left forward in order to fix and kill elements of the enemy lead company in Killzones E or F." .

b. <u>The concept of operations paragraph.</u> It is now accepted practice in the Canadian Army to include the commander's intent as part as the <u>concept of operations paragraph </u>of formal orders. In full it may comprises three things:

(1) **The purpose**. This explains, within the context of the mission of the next higher commander, the "why" of the mission. It should explain how it is that the task assigned to the section or platoon fits into the intent of the company commander. This can be an elaboration of the mission statement as required. This explanation of the task will always be included.

(2) **The method**. This explains the concept of 'how' the operation is to be conducted without assigning specific tasks. It is here that the company or platoon main effort task should be identified. In a warning order or fragmentary order, the method may only be sketched out in outline form.

(3) The **desired result (end state).** This describes the desired effect on the enemy force and the posture of the section or platoon on completion of the operation. It should be included if possible to further explain the purpose; i.e.,

"2. Mission. To defend left forward in order to kill elements of the enemy's lead company in Kilizones E or F."

3. Execution.

a. Concept of operations. My intent is to kill elements of the enemy lead company in killing zones E or F so that the company and battalion can prevent their further advance through approach A **[PURPOSE].** We will deploy on order to the Left forward platoon position on either Battle Position 101 or 102 once the approach route of the enemy is confirmed. We will stop any enemy advance through the killing zones. Once we have deployed, elements of B Sqn will carry out a counter-attack from the left to destroy the enemy in the rear of the killing zone. They remain the Battle Group main effort **[METHOD].** As an end state, I want to prevent enemy penetration, including enemy recce elements, beyond our Platoon position. I want to destroy at least one enemy company in the killing zone, and I want to be able to withdraw quickly from the Battle position to move elsewhere if required **[RESULT DESIRED]."**

26.   When a platoon commander receives orders, or a warning order, he should find the intent of the superior commander (the commander two levels up - the CO) expressed as part of the friendly forces paragraph (paragraph 1 b). The intent of his company commander (OC) is expressed in the mission paragraph and explained in the concept of operations paragraph.

27.   These statements of intent will be the pivot around which platoon commander plans, directs and fights. It provides the guidance, sets the limits, and provides the reference which help him and his section commanders make the immediate decisions required on the battlefield.

28.   The mission of the OC will become paragraph 1 b. of the platoon commanders orders. The Platoon commander will derive his own mission paragraph by conducting a mission analysis (see below) of the OC's mission and concept of operations paragraphs (his intent). The mission analysis should produce a platoon mission paragraph which comprises both the assigned task and the purpose of this task as it relates to the company commander's, and the battalion commander's, intent.

29.   The mission, (particularly the purpose) should be considered carefully and written clearly. Once formulated, the Platoon commander's mission becomes paragraph 2 of his own orders, and will receive explanation in his concept of operations paragraph. It will also remain as the aim of his combat estimate and serve as a constant guide throughout the planning and conduct of the operation.

30.   **Mission Analysis**. Upon receipt of a mission, a platoon commander should analyze the assigned task (found in paragraph 3b of the OCs orders) and the higher commander's intent (found in paragraphs 1 b and 3a of the OCs orders). This will allow him to see the relationship of the task to the higher intent, and guide him and his subordinate in their battle procedure. He conducts his mission analysis by finding the answers to the following questions:

    a.   What is the intent of my commander, and that of my superior commander, and what is my role in the overall plan?

    b.   What are my assigned tasks and my implied tasks in this plan, and what is the most important task (the main effort) for the battalion, and the company?

    c.   What freedom of action and/or restraints do I have?

    d.   Has the tactical situation changed so much since I received orders that the plan and my task must be modified?

31.   The answers to these questions provide the platoon commander with the information he needs to formulate his mission paragraph, and

serves as a start point for further planning. In pressing circumstances the mission paragraph may be used as the basis for quick fragmentary orders. In all circumstances, as battle procedure progresses and the operation commences, the mission analysis must be conducted again if combat estimates determine that changes are needed. This will allow the commander to reassess the progress of the operation against his mission to determine whether the situation has changed to the point where further decisions are necessary. Mission analysis is covered in greater detail below.

INITIATIVE

32.   Initiative is derived from a clear understanding of the superior commander's intent and the higher commander's concept of operations. This understanding comes from good mission analysis. Mission analysis and the resulting mission paragraph and mission orders, will define the freedom of action a section or platoon has been given in the context of the desired result.

33.   Once the intent of a task is clearly understood, platoon and section commanders have a responsibility to take the initiative to act in accordance with the demands of the situation without waiting for orders, to produce the results required. Higher commanders should encourage the use of initiative by providing clear missions and intents, by limiting the control measures assigned, and by intervening in the execution of tasks. The higher commander should intervene only if the failure of a subordinate to accomplish a task endangers the overall mission.

COMMAND PRESENCE

34.   Once a commander has issued his orders, he must position himself to influence the most important task (the main effort) with his personal presence and leadership. Leadership is the critical element in combat. It is most effective when it is face to face, and the most powerful leadership is personal example. This will require that platoon and section commanders lead from the front. Only by being well forward can a leader determine where and when his personal presence

is required to either show example or, when circumstances change, to react with initiative and modify the execution of a task.

35.   Forward command does not mean that a platoon commander should get wrapped up in the soldier's fight. He must at all times distance himself mentally to read the battle, to anticipate the next event and to seize opportunities as they unfold.

TRUST, RESPECT AND COHESION

36.   For decentralized command to work, there must be explicit trust up and down the chain of command and laterally within the unit. There are several dimensions to this trust.

    a.   **Leaders must trust and respect their soldiers**. Decentralized command demands commanders who are capable of letting go and allowing subordinates to use their own initiative. This may mean that a commander must live with a degree of uncertainty and the expectation that subordinates will sometimes make mistakes. These will diminish with time and should not deter commanders from pushing decision thresholds down to the lowest levels as much as possible.

    b.   **Subordinates must be worthy of trust and respect**. A subordinate combat leader must be capable of taking the initiative. He must be loyal and aggressively dedicated to accomplishing the spirit of his mission (the commander's intent), as well as the task. He must have the ability and discipline to work without close supervision, and strive in these conditions to achieve the best results and not the minimum standard prescribed.

    c.   **Subordinates must trust and respect leaders.** In order for soldiers to work whole heartedly to support orders, they must be convinced of the competence and good intentions of their superiors. The section and platoon commander are the most important part in the chain of command. Lack of competence at their level will be immediately recognized. For this reason,

these commanders must have mastery of the techniques outlined in this manual and of unit SOPs. As well, they must have an ability to adapt to changing circumstances by using initiative and sound tactical sense. Above all, these commanders must be manifestly loyal to the higher commander's intent and demonstrate this loyalty to their subordinates by remaining aggressively dedicated to high standards in the pursuit of results.

37.   Trust and respect are critical to decentralized command. They promote cohesion. They are enhanced by the retention of individuals for long tours with the same section or platoon, and by the establishment of common techniques, procedures, drills and tactics.

38.   The process of selection and training of leaders must focus on the character qualities of determination and initiative. There is no place in the infantry platoon for unthinking commanders who lack the ability or desire to pursue the highest standards in the execution of their tasks.

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SECTION 2

BATTLE PROCEDURE

PREPARATION FOR BATTLE

1.   Canadian Army tactical doctrine demands that our units, subunits and small units be capable of conducting battle procedure and executing operations faster than the enemy. Only by this means can Canadian troops maintain the tactical initiative in battle. Speed and effectiveness in operations can only be achieved if battle procedure is good. Battle procedure is the process by which a commander receives his orders, makes his reconnaissance and plan, prepares and issues his orders, and prepares and deploys his troops for battle. The procedure is an essential part of the larger unit decision making-execution cycle, which is fundamental to the conduct of all types of operations. It should be executed to make best use of time by having concurrent activity at each level of command.

2.   Battle procedure is a continuous cycle revisited every time a warning order is issued. Before hostilities commence, or during lulls in operations, there may be enough time to complete each step of the procedure. During these periods the emphasis should be on thorough preparation and detailed planning, with efforts being made to produce well coordinated plans. However, during operations there will seldom be time for this same thoroughness. It will be more important in these circumstances for units to plan and execute operations faster than the enemy, pre-empting enemy moves and forcing the enemy to react to his own disadvantage; and to do this in an atmosphere of uncertainty and chaos. For this reason, commanders must know how to streamline battle procedure to suit the time constraints of rapidly changing situations. On these occasions commanders must focus on only those essential steps necessary to produce simple and aggressive plans, and rely upon the exercise of decentralized command at all levels for the effective execution of these plans. To allow units to operate in the demanding environment of the modern battlefield, or in the uncertainty of low level operations, the process of battle procedure must be thoroughly understood and well practised by all commanders.

SEQUENCE

3.   **Sequence**. The Infantry recognizes seventeen steps to battle procedure, the most important of which are dealt with in the sections of this chapter. They begin with the receipt of the warning order (Wng O). At that point a commander takes some or all the following sequential steps:

   a. **Receives Wng O (1)**. Once received, a commander must analyze the assigned mission to ensure he understands both the task he has been given and the higher commander's intent. If a full mission analysis is possible then, it must be conducted. This will give the leader his own mission statement which in turn will guide him throughout the remainder of his battle procedure. (Mission analysis is covered later)

   b. **Conducts Map Study (2) and Time Appreciation (3).** The solution to all tactical problems lies in an understanding of the relationship between time available, the space and ground involved, and the combat power at hand. Therefore, it is necessary that the commander acquires some perspective of the time and space aspects of the mission. He should consider distances to be covered and the time constraint he is under. He may determine at this point whether or not every step of battle procedure can be followed or if streamlining and directive control are required.

> **NOTE**
> **If the time constraints are severe, a commander should limit his actions to only the essential steps of battle procedure which are: issues a Wng O (4), moves to R.V. and receives orders (5), and issues orders (13).**

   c. **Issues Wng O (4).** This step allows the soldiers of the section or platoon to begin preparations for combat. If possible it should include the platoon/section mission paragraph and a statement of commanders' intent.

d.   **Moves to and Receives Orders (5).** This is where a commander should receive information about the what, where, when and why of a mission. Mission analysis should again be conducted immediately upon receipt of the orders to ensure a clear understanding of the mission, what tasks are assigned, those which have priority, and what tasks have not been assigned, but which may be necessary. This should confirm the results of the first mission analysis or modify it accordingly, and should result in a confirmed mission paragraph and statement of intent (outline concept of operations paragraph).

e.   **Conducts Detailed Map Study (6) and Time Appreciation (7).** After orders a commander should revisit the time and space aspects of his mission, looking closely at the constraints imposed by the company plan. The commander must ascertain distances to be covered and, if time allows, complete a detailed time appreciation. A time appreciation format is included in Annex A. A detailed map study and time appreciation may contribute to the formulation of an initial outline plan or to several viable courses of action (COAs). If several COAs are possible the commander should pick a point on the ground where and when he thinks he will have enough information about the enemy to commit to one or another COA. This point is known as a decision point (DP).

f.   **Issues a Supplementary Warning Order (8).** If a commander has any further information which can assist his men in their preparations, or if he has part of his plan already confirmed (i.e., a preliminary move to a company RV), he may issue a supplementary Wng 0.

g.   **Makes Recce Plan (9) and Conducts Recce (10).** A commander must do everything he can, within the time available, to build a clear mental picture of the situation and the enemy, isolating particularly those points where the enemy is weak, or where he may expose weakness in some form. This knowledge will help considerably in bringing the principles of surprise, concentration of force and flexibility into the combat estimate and the plan.

To gather or confirm this type of information a commander must take advantage of any opportunity to conduct a recce or to debrief those who have knowledge of the enemy. As well, a commander must attempt during his reconnaissance to confirm any initial outline plan or possible COAs and DPs he has established as a result of his map and time appreciations.

h. **Does Estimate (11) and Completes Plan (12).** This is the point in battle procedure where the commander must make decisions. He may decide to adopt his initial plan and develop it. He may decide to have two or more firm COAs and develop these into workable plans, knowing that he must chose one of these by a specific point (his DP) later on. Or he may start fresh and conduct a lengthy estimate before deciding on a plan. In all cases the commander must follow the same pattern of mental checks to ensure he is taking advantage of every means available to ensure success of the mission and survival of his soldiers.

i. **Issues Orders (13).** This is the most important step in battle procedure. It is the means by which the plan and the intent are transmitted clearly to subordinates. Competence at issuing orders is a first necessity for all infantry leaders, and requires constant practice.

j. **Supervises Preparations (14) and Conducts Rehearsals (15).** It is never enough to simply give orders. Commanders are also responsible to ensure that orders are adequately understood, and that soldiers are ready and able to carry them out. To this end the commander should supervise particular preparations which are important and which have not already been done. As well, he should rehearse his soldiers in the "action at the objective", and other essential phases of the operation. If time and space allow, physical rehearsals are best. If not the commander should verbally rehearse the operation with all concerned.

k.   **Ensures Forced Rest x,16) and Conducts Final Briefing (17).** Rest may not be possible prior to an operation, but should be taken if the opportunity arises. Before commencement it is important that a commander briefs his men on recent developments which may effect the operation, and confirm their knowledge of the plan or reinforce their determination with appropriate words. Also, it is the responsibility of the commander to ensure that his troops arrive at the right place at the right time and in the correct grouping to commence an operation. This is an extremely important final step in battle procedure.

ELEMENTS OF BATTLE PROCEDURE

4.   As a general rule commanders should take no more than 1 /3 of the time remaining to H hour in the preparation and passage of orders. This leaves 2/3 of time remaining for the sections to prepare properly for battle. Other elements which contribute to efficient battle procedure are:

a.   thorough knowledge of the grouping system;

b.   early warning and concurrent preparation at all levels;

c.   anticipation of future tasks at all levels; and

d.   efficient drills for reconnaissance and the issue of orders.

5.   The Grouping System. Battle procedure is simplified by the use of standard groups at all levels of command. They include:

a.   the Reconnaissance Group (R Gp),

b.   Orders Group (0 Gp), and

c.   the Reconnaissance Party (recce party) and the main body.

6.   The Platoon Reconnaissance Group. The platoon commander will include in his R Gp those members whose advice he will require during his reconnaissance and planning. The platoon commander will include in his R Gp his signaller and any attached combat support weapons detachment representatives whose advice he may require.

7.   The Platoon Orders Group. The platoon commander will convene those who must receive and carry out his orders. The O Gp normally includes:

    a. the platoon commander,

    b. the platoon second in command,

    c. the section commanders,

    d. the platoon weapons detachment commander (if necessary),

    e. support weapons detachment commanders (if attached),

    f. a communicator (will provide protection), and

    g. a runner (will provide protection).

8.   When a member of the 0 Gp is not available for orders due to other duties, he must be briefed at the earliest opportunity. For example, the platoon 21C may be supervising platoon battle preparations while the commander gives orders to the rest of the 0 Gp.

9.   The Section Orders Grout). The section 0 Gp includes all members of the section. If members of the section are absent on other duties such as sentries, the section commander must ensure they receive the orders at the earliest opportunity.

10.   The Platoon Reconnaissance Party. The platoon 21C and at least one section guide make up the platoon reconnaissance party. They are employed whenever a platoon is required to move to a new

location. As part of the company reconnaissance party under the control of the company 21C, their tasks include:

clearing the area to be occupied and, subsequently, protecting it;

b.   preparing the area for occupation; and

c.   guiding the main body into the area.

11.   The Main Body. The main body is the remainder of the platoon; it forms part of the company F (fighting) echelon. When the platoon commander is absent, the platoon 21C is responsible for the main body.

12.   The platoon 21C supervises the platoon preparations for battle, assisted by the sections' seconds in command. He moves the platoon as required and does all other tasks ordered by the platoon commander.

13.   Concurrent Activity. As time will usually be at a premium, the platoon commander must maximize the time available by ensuring that the platoon carries out battle preparations concurrently. He may have to take his R Gp with him to the company commander's orders or arrange a time and place for it to meet him after orders. In addition, he may give preliminary orders and make his detailed reconnaissance accompanied by his subordinates.

Ser	Platoon Commander	Platoon 2IC	Section Commander
(a)	(b)	(c)	(d)
1	1. Receives Wng O 2. Does quick map study 3. Does quick time appreciation 4. Issues Wng O	1. Receives Wng. O	
2	5. Receives orders from OC 6. Does detailed map study 7. Does detailed time appreciation 8. Issues supplementary Wng O as required.	2. Passes Wng O to section commanders with add administration details as required 3. Supervises preparations for anticipated operations, and conduct rehearsals of SOP's if required	1. Passes on Wng O 2. Details and supervises section preparations, including: a. Initial inspection of weapons, equipment and vehicles b. Ensure all special requirements are met c. Ensure feeding, rest, etc d. Ensure POL, and ammunition loads are topped up.

Figure 3-2-1 Platoon Battle Procedures (1 of 2)

Ser	Platoon Commander	Platoon 2IC	Section Commander
(a)	(b)	(c)	(d)
3	9. Does recce plan 10. Conducts recce 11. Does estimate 12. Completes plan 13. Gives orders	4. Passes supplemental Wng O to section commanders 5. Moves the platoon if required 6. Assembles and dispatches R Gp to RV 7. Supervises preparations 8. Assists platoon commander in orders preparations 9. Ensures O Gp arrives at RV for platoon commander's orders	3. Tasks sections' 2IC to continue preparations 4. Move to RV for O gr; 5. Receives orders; 6. Prepares recce plan and conducts recce (if time permits),
4	14. Supervises preparations 15. Conducts rehearsals 16. Ensures forced rest if time permits	10. Assists platoon commander in supervision of preparations and final details of the operation 11. Arranges for personal and spiritual needs of platoon	7. Prepares and gives orders 8. Conducts final inspection 9. Section participates in rehearsals 10. Enforces forced rest and personal administration
5	17. Issues final briefing to entire platoon	12. Arranges platoon for final briefing.	11. Assembles section for briefing.

Figure 3-2-1 Platoon Battle Procedures (2 of 2)

MISSION ANALYSIS

14.   Mission analysis is the first and most important element in preparing a plan. Mission analysis forces the commander to focus on the results desired, and not on the mere mechanics of an operation. During the execution of a plan it can also be used to re-assess the assigned tasks against the higher intent, so that judgement may be made concerning the continuing validity of the specified tasks. Commanders then may exercise initiative by modifying their tasks in order to achieve **the results desired** (the intent). In this manner commanders may exploit a situation without waiting for orders or to react to a changed situation of which his own commander may be unaware.

15.   For battle procedure to be effective a commander must first completely understand the mission. This is achieved by mission analysis. This analysis may begin with the receipt of the Wng O, if it includes a clearly assigned task (expressed as a task verb, i.e., to attack) and an idea of the higher commanders's intent (identifying the purpose and result desired of the overall operation). If the platoon/section commander has not received the commander's intent in the warning order, he will have to wait to receive them in the concept of operations paragraph of formal orders. Whenever they are received the platoon/section commander should conduct a mission analysis. By doing this early in the battle procedure process the commander can formulate his own mission and intent. This mission and intent will better focus his activities and help him devise a plan more quickly. Mission analysis is dons by finding the answers to the following four questions:

a. **"What is the intention of my commanders and what is my role in the overall plan?"** The first step is to look carefully at the orders to discern what is required and what are the commanders' intents. The intent includes the purpose of the mission and the result desired by the company and battalion commanders. These must be clearly understood. If the company commander has issued a mission statement to the platoon commander then this may be relatively easy. If not,

then the platoon commander must consider the task verb (i.e., to secure the company RV) in the context of the commander's intent as described in his concept of operations paragraph. If analysis can not clearly define how exactly the task relates to the company commanders purpose and desired results then the platoon commander must ask for further clarification.

b. **"What am I required to do or what essential tasks do I have to complete in order to carry out the mission?"** Some tasks will be clearly specified in the orders. One of these may have been designated as the company's main effort, giving it priority over all other tasks. Regardless, all assigned tasks should be looked at to determine their importance to the overall plan. Also, analysis of the rest of the orders should be made as this may reveal other implied tasks. If any of these tasks are essential to accomplish the overall plan then they must be included in the platoon plan. For example, the platoon has been ordered to gain lodgement in an enemy defensive position. The plan calls for the subsequent passage of a depth platoon through this lodgement to continue the clearance. The tasks of marking the break-in point and of providing fire support to this second platoon have not been assigned, however, the platoon commander knows that he had better plan to do these if the company operation is to succeed. These would be implied tasks. Routine or inherent tasks that must be performed in most tactical situations are not implied tasks. These could include such things as sending SITREPs or doing routine refuelling. Implied tasks are those non-routine, unassigned tasks which may need to be done to facilitate the better achievement of the overall plan.

c. **"What freedom of action do I have and are there any constraints?"** Time and space restrictions such as H hours and boundaries or limits of exploitation may have been imposed on the operation which will restrict your plan. These, along with other restrictions (such as the requirement to conform to Company formation) must be considered in the formulation of the plan. By understanding the stated restrictions a

platoon/section commander will know the freedom of action he has to formulate bold aggressive plans.

d.   **"Has the tactical situation changed in principle and would the company commander still have given me these tasks had he known about the changed situation?"** This is the final question, and one constantly applied throughout the operation, since battles rarely unfold as planned. At all levels it must be understood that orders are to be obeyed and are not a matter for discussion. The only exception to this is when the situation has so changed that the tasks originally given are no longer applicable. In this situation a leader must be prepared to act on his own initiative. Platoon/section commanders can only make this judgement if they have a good grasp of the intention of their battlegroup/company commander and thoroughly understand their company/platoon commander's plan. A decision to supplement, modify, change priorities or alter tasks will inevitably affect other platoons, the company, or even the battlegroup. Such a decision therefore should be reported to the company commander as soon as possible. The following are guidelines for action by commanders:

   (1)   no change to situation, continue as planned; or

   (2)   new situation, the options are:

      (a)   minor changes: same mission, same plan, change minor task;

      (b)   significant change: same mission, new plan; or

      (c)   major changes: new mission, new plan, refer back to higher commander or, if not possible, re-examine the commander's intent and take action in accordance with his concept of operations.

16.   In many instances, when the fluidity of the situation demands, mission analysis might be the only consideration by junior commanders

in arriving at a mission and a simple plan. Commanders may have to issue fragmentary orders, based on a clear mission statement, and rely upon subordinates to exercise initiative to achieve the results desired. This is the essence of decentralized command. It calls for commanders at all levels to be able to act and react using their own judgement, without waiting for orders, to exploit opportunities and carry out the necessary actions to execute the mission according to the commander's intent.

WARNING ORDERS

17.   Contents. When the platoon commander receives Wng 0 for impending operation, he conducts a mission analysis and issues his own to all concerned. Wng 0's may vary according to the operation but should always include:

   a.   general outline of the situation and **probable task** and **company commander's intent,** or his own mission and intent if it is formulated;

   b.   location and time of RV for the 0 Gp;

   c.   degree of warning or time for movement of the main body: e.g., "NO MOVE BEFORE ... HOURS" or "BEAT ... HOURS (OR MINUTES) NOTICE TO MOVE FROM... HOURS." This avoids keeping the men in an unnecessary state of tension and enables them to prepare their weapons, eat and rest; and

   d.   acknowledgement.

18.   The platoon commander may include in the Wng 0 whatever information is available such as restrictions on the use of transport, regrouping, restrictions on reconnaissance, location of the assembly area, H hour, administrative instructions, etc. A leader should pass on any information which can aid his soldiers in preparations and which can make his formal orders more simple.

> "Warning Order.
>
> 1.   The enemy is preparing defensive positions around hill 390.
>
> 2.   The OC intends to prevent this by capturing Hill 390 by last light.
>
> 3.   2 pl will attack FARM HOUSE GR 947318 (the task) in order to secure a good fire position to support a combat team attack   on   hill   390   (the purpose). I want to be able to support this   attack   with   at   least   three MRAAWs and two GPMGs from suitable fire positions (the intent).
>
> 4.   Orders Group at school GR 514193 at 1 100 hrs.
>
> 5.   No move before 1 120 hrs.
>
> 6.   Additional MRAAW ammunition and GPMGs to be drawn from company.
>
> 7.   Acknowledge."

Figure 3-2-2 Example of a Warning Order

TIME APPRECIATION

19.   Time must always be used efficiently. Time appreciations must be used judiciously and become an automatic thought process. Critical questions are:

a.   By what time must the mission be accomplished?

b.   How much time is available to complete the mission?

c.   What must be done at all levels in the time available?

d.   Which tasks can be done simultaneously?

e.   How fast is the situation changing? and most importantly

f.   Can I afford to do complete battle procedure, or do I streamline?

20.   Time appreciations are prepared by listing all actions that must be done, in reverse order from the time by which the mission or tasks must be accomplished, then assigning time periods to each. This will permit the platoon/section commander to decide on essential timings such as H hour (if this has not been given in the company/combat team commander's orders). When the H hour is given, the time appreciation begins and works back from it.

21.   When making his time appreciation, the commander must evaluate the time needed for the movement and deployment of troops. This time can be affected by the terrain, tactical situation, mode of transport and weather.

22.   An example of a time appreciation for a platoon attack is at Annex A.

MAP STUDIES

23.   If time allows for complete battle procedure, a commander will conduct an initial map study on receipt of a warning order and a detailed map study after he has received orders. In the initial study he should attempt to understand the time and space problems concerning the mission. He should consider distances to be travelled and the general terrain to be covered. He may decide at this time if preliminary moves are required. The detailed map study will be more comprehensive. The following steps apply:

a.   **Defining your part of the battlefield.** All battlefields (or areas of operation) are defined in the four dimensions of width, depth, height and time. All commanders must understand these dimensions in their area of interest. Using the company mission as a guideline, the platoon commander should determine his weapon and vehicle ranges and his room to

manoeuvre in relation to the other platoons/sections around him.

b. Describing the battlefield. Commanders need to identify the limitations and opportunities of the area of operations and the impact of these on the friendly and enemy forces. To get a good description of the battlefield the commander should consider:

    (1) Ground. Using COPPED or a similar method, the commander should determine the cover available, the approaches in and out of the area, obstacles, defiles and any other features that may influence the operation.

    (2) Weather. Weather has implications on air support, Surveillance and Target Acquisition (STA) systems, communications, equipment performance and the ability of your soldiers to fight. Commanders should attempt to determine how and when weather will effect their ability in fire and movement.

    (3) Other Factors. Factors such as local politics, population presence or movement, civilian infrastructure and media may have a great impact on the way you do business in your area and must be considered in your planning.

24.   By conducting a detailed map study a commander can determine the following:

a. what ranges he can acquire and engage the enemy;

b. how far and fast his soldiers and vehicles can move;

c. how far and fast the enemy can move;

d. what danger he may have from enemy direct and indirect or air attack;

e.   what terrain features he might use to surprise the enemy;

f.   when weather might effect his performance; and

g.   what limitations might be imposed upon him by civilian and/or media presence.

OUTLINE PLANS

25.   The process of conducting a detailed map study and a time appreciation might lead to the development of an outline plan or to several possible courses of action (COAs). A commander will want to confirm or adjust these during his reconnaissance. The outline plan or COAs should aim to achieve surprise on the enemy, when and where he is weakest, by using coordinated fire and movement. If there are several equally good COAs then the commander should try to determine when and where he must make his decision to do one COA or the other. This is called a decision point (DP).

RECONNAISSANCE

26.   The platoon commander may carry out a reconnaissance to obtain information about the enemy and the ground, which will permit him to better plan the operation. Rarely will there be enough time for him to see all he would like to see. He must therefore make a reconnaissance plan that will permit him to see the ground from the best vantage point in the time available. Before conducting his reconnaissance a platoon commander should:

a.   obtain all available information about the situation;

b.   be certain about the aim of his reconnaissance;

c.   decide what to look for to achieve his mission;

d.   study the map and any air photographs available to get as much information as possible about the terrain, likely view points, routes and obstacles;

e. consider the time available for the reconnaissance; and

f. if in contact with the enemy, pay strict attention to personal concealment.

27.   From the reconnaissance the commander should find out how best to exploit any known enemy weakness. He should attempt to determine how he can employ the principles of surprise, concentration of force and offensive action into a plan which targets this weakness. To do this he first needs to know details of the enemy and ground. The types of things he should ascertain for different operations are as follows:

a. **Attack.**

(1) Location, identification, disposition and strength of enemy.

(2) Known or suspected DF tasks.

(3) Location of obstacles.

(4) Lines of advance and covered approaches to the objective.

(5) Fire positions.

(6) Point, position or approach where enemy is weakest, or the capture of which could break the enemy's will to resist.

b. **Defence.**

(1) Fields of fire.

(2) Good observation posts.

(3) Concealment.

(4) Concealed routes to other areas.

(5)   Locations where enemy may be deceived, forced to expose a flank or become vulnerable to surprise by ambush or counter attack.

ESTIMATES

28.   General. The estimate of the situation (estimate), is a logical process of reasoning by which a commander considers all the circumstances affecting the military situation and decides on to the COA to be taken to accomplish his mission. The procedure facilitates clear thinking. The commander considers what must be done and analyses the factors that affect how it can be done. This analysis will help him decide upon a sound COA. Platoon commanders may only occasionally conduct a full estimate and section commanders rarely if ever. The combat estimate covered below is the tool used more frequently by both levels of command. However, circumstances may arise, particularly in deliberate or independent operations, where conducting a full estimate will be useful.

29.   Sequence for an estimate. Whatever the level of command, the sequence is the same:

a.   conduct mission analysis;

b.   identify and consider the relevant factors;

c.   consider courses open; and

d.   elect the best course of action and translate it into a plan.

30.   Mission Analysis. Mission analysis should have already been conducted on receipt of the Wng O or immediately after receiving orders. Despite this it should also be done at the start of the estimate process in order to confirm the mission, clear the mind of the commander and to ensure that he clearly understands the higher commander's intent, his assigned and implied tasks, and restrictions applied.

31.   Factors. The commander should consider only those factors that will directly influence the achievement of the mission. Each factor must lead to a useful deduction pertinent to the use of the available forces/weapons, ground and time. At platoon and section level the factors most likely to be considered are:

a. enemy,

b. own forces,

c. ground and approaches,

d. time and space,

e. assessment of tasks.

32.   Courses. The commander then weighs up the deductions derived from the factors and examines all courses open to him and to the enemy.

33.   Platoon commanders should war game each possible COA against the likely enemy response and try to visualize the flow of operations from the initial dispositions through each critical event as far as possible. He may conduct this war game alone, but it is preferable that he do it with his second in command, or his section commanders. This will serve the purpose of including more than one mind into the planning process and at the same time put his subordinates into the commander's mind set early, while giving them a feeling of participation in the plan.

34.   From this war gaming, the platoon commander should be able to decide the best COA to achieve the result desired. It is important to think about the operation from an enemy perspective in order to ascertain his likely actions and reactions and how best these can be defeated.

35.   If the result desired is dependant on an enemy movement, approach or unconfirmed disposition, then the commander may not

want to commit himself to one detailed COA for the entire operation, and choose instead to have one or more contingency COA. He must in this case attempt to isolate what criteria he needs to confirm in order to commit himself to one of these. Or, he must determine the point in time (the decision point) when he will have to commit himself to a COA regardless of his knowledge of the enemy situation.

36.   All of his soldiers must be aware of any contingency courses he has planned, and be able to act quickly upon short orders to effect the necessary changes should a contingency COA become necessary. Mastering the art of war gaming, contingency planning and picking decision points are a first step toward acquiring skill at tactics.

37.   <u>Plan</u>. The commander decides upon the best course or contingencies open to him and translates the deductions made in the estimate into a plan.

38.   The plan should be as simple as possible. It should focus on the achievement of the results desired as were stated in the mission statement. It should attempt to achieve these results in the most expeditious manner, exploiting known or perceived enemy weakness through surprise, coordination and concentration of force and aggressive offensive action.

39.   Lastly, the plan should be sufficiently flexible to accommodate the unexpected.

COMBAT ESTIMATE

40. <u>The Combat Estimate</u>. The fast pace of modern combat will preclude the conduct of full estimates by platoon and section commanders. Instead they will be required to make immediate plans based on limited knowledge of the situation. On these occasions they should conduct combat estimates. A proven sequence for this type of estimate is as follows:

a.   **Mission Analysis**. Clarify the commander's intent and the tasks assigned.

b.   **Ground.** Consider each approach LEFT, RIGHT, CENTRE using the mnemonic COPPED:

(1)   "C" for COVER/CONCEALMENT. How much cover and concealment does it offer?

(2)   "O" for OBSTACLES. Are there any? How can they be overcome?

(3)   "P" for POSITIONS FOR FIRE. From where can I fire to support this attack? Where is the enemy likely to put his mutual support weapons?

(4)   "P" for POSITION FOR OBSERVATION. From where can I observe best? From where can the enemy best observe this approach.

(5)   "E" for ENEMY. Where is he strong, and where is he weak? Are there other probable positions? What is he likely to do? What can I do that will break his will or ability to fight?

(6)   "D" for DISTANCE. How long is this approach? How long will it take to travel it? How long must I have covering fire?

c.   **Plan.** The plan may well be dictated by the ground. It must be simple, bold and aggressive.

41.   <u>At the section level</u>. The section commander must also be able to make a combat estimate and plans. However, in combat his reaction may often be dictated by the situation, and might require quicker decisions. For example:

a.   if caught in the open within charging distance, the only possible course may be to assault; and

b.   if stopped by enemy small arms fire at normal range, he must decide:

(1)   the direction of assault or withdrawal; and

(2)   where to position the fire support group. If the fire support group is committed on one flank this will influence his plan.

ORDERS

42.   The orders process. Orders are the means by which the commander communicates his plan to his subordinates. They are always delivered using a standard format. Orders may be written, oral or graphic, or more frequently, a combination of these.

43.   At the section level, the commander will always deliver his orders orally. If possible, orders are given in a secure area. The commander may use an aide memoir to ensure that he covers all points.

44.   Before delivering his orders, the commander should christen the ground from left to right and from front to rear, pointing out prominent objects and features and naming reference points to which he will refer in the orders. A model is very useful if the actual ground for the operation cannot be observed.

45.   Orders are always given in a standard sequence. This helps everyone to understand because the pattern is familiar and ensures that important matters are not forgotten.

46.   On the completion of orders, the participants must know exactly what is to be achieved and why, how it is to be achieved and what role they must play. If the mission is to succeed, then the orders must be issued in a timely and efficient manner. Orders must be understood and achievable.

47.   Extracting Orders. The orders the platoon commander receives from his company commander cannot simply be passed on to section commanders as he receives them. The company commander's orders will contain some details irrelevant to the sections, and will not likely assign tasks to individual sections. Therefore the platoon commander, and the section commanders intern, will have to extract only the

relevant parts of the higher commanders orders and put these in the appropriate place in their own orders format.

48.   Usually a platoon commander can fill paragraphs 1, 3 c., 4, and 5 with information extracted correctly from his superior's orders. His Mission paragraph (paragraph 2), however, must come from a good mission analysis of his commander's intent. His Execution paragraph must explain his mission in a statement of intent and present the plan which he came to as a result of his own estimate.

BATTLE ORDERS

49.   Quick Response. There will be many occasions in battle that will demand very quick reaction and will require the delivery of immediate orders. Such orders will contain essential information only. For example, a platoon commander can limit his orders for a quick dismounted attack to:

    a. **TERRAIN.** Christen the ground, and name objectives.

    b. **ENEMY**

    c. **MISSION (task and purpose)**

    d. **EXECUTION. Statement of intent (result desired).**

      (1) left, frontal or right flanking;

      (2) position of fire section (if not already clear);

      (3) final assault position and route to it; and

      (4) any variations of battle drill, such as:

        (a) orders for smoke or illumination,

        (b) additional fire support,

      (c)   only one section in the assault,

      (d)   protection of the open flank of the assault party,

      (e)   the reorganization drill of the consolidation phase, and

      (f)   who is to search the objective.

50.   At section level, quick battle orders contain essential information only and are given using the pneumonic **GETM** in the following manner:

    a.   **Group.** Designates section, group or team.

    b.   **Enemy.** Brief indication of enemy.

    c.   **Task.** Cover or assault.

    d.   **Move Order.** Designate type of movement and time.

51.   The tactical situation may demand that orders be delivered quickly or abbreviated. A section commander in immediate contact with the enemy may give orders consisting of ENEMY LEFT - CHARGE!

EXAMPLES - IMMEDIATE ORDERS
Example 1: Three Section. Enemy trench on crest left edge. Two Group: fire support from your present position. One Group: Crawl to tree line. Group assault from there on my order. FOLLOW ME.
Example 2: Two Group. Enemy rifleman beside burning tank. Delta Team to provide covering fire from here. Charlie Team will assault from treeline half right. Assault when Delta begins rapid fire. MOVE NOW.
Example 3: Bravo Team. Enemy trench half left, 30 metres. Alpha is covering. We'll assault from here. Leblanc cover me first. FIRE.

Figure 3-2-3 Sample Section Immediate Orders Using GETM.

REHEARSALS AND FINAL BRIEFS

52.   Regardless of how well orders have been given there is always need to ensure that the orders have been disseminated properly and clearly understood. One of the best means to ensure this is through rehearsals. Use the following priority when rehearsing the mission:

    a.   actions on the objective or for contingency action,

    b.   battle drills for fire and movement,

    c.   actions on enemy contact,

    d.   movement techniques, and

    e.   casualty evacuation.

53.   Rehearsals include holding briefbacks of individual duties and the use sand tables, sketches, or chalkboards to talk through the plan. Contingencies should be at least verbally rehearsed, and likely enemy reactions should be covered and planned for to prepare everyone mentally for possible enemy COA. Rehearsals should be conducted as an open forum with subordinates bringing up suggestions and questions. This is where the fine points of coordination will occur, and details added to contingency plans.

54.   Physical rehearsals are conducted on mock-ups of the objective if possible. Verbal talk-throughs should be followed by walk-throughs and finally, full-speed exercises. Before an operation commences, a final brief should be conducted to effect last minute changes, confirm the tasks and duties and to give encouragement to the soldiers.

BATTLE PROCEDURE IN MECHANIZED OPERATIONS

55.   <u>Communications</u>. The excellent communications available in mechanized units enables battle procedure to be speeded up, thus permitting swifter reaction to developments on the battlefield.

56.   Efficient battle procedure in a mechanized unit depends on:

    a.   initial orders,

    b.   contact reports,

    c.   warning order, and

    d.   radio orders.

57.   Initial Orders. It may be possible for section commanders to listen to their company commander's initial radio orders. If so, they must carefully note all coordinating instructions such as report lines and must mark these accurately on their maps. This is the best way to record many details.

58.   Contact Reports. Contact with the enemy must be reported at once. If involved in a fire fight, the short radio message **"CONTACT -WAIT OUT" gives warning** to other call signs on the net who must then minimize radio transmissions. This must be followed quickly by a full contact report. Figure 3-2-4 below describes the sequence.

59.   Warning Orders Format. The format for a radio warning order for a hasty attack is at Figure 3-2-5.

60.   Radio Orders Format. Radio orders must be brief. If a comprehensive Wng O has been given, radio orders need only deal with subsequent developments on the battlefield. Often, platoon commanders do not give radio orders as all call signs are monitoring the combat team net. The format for radio orders for a hasty attack is at Figure 3-2-6.

CONTACT REPORT BY RADIO	EXPLANATION
1, this is 11. Contact. Wait out. This initial report is enhanced as quickly as possible.	Serves as a warning to clear the air.
1, this is 11. Contact.	Introduction
Grid reference 12345678.	Grid reference of the enemy - never encode.
Four tanks moving SOUTH along road.	What, how many, what are they doing?
1130 hours.	Give time of sighting if there was a delay in reporting the contact.
Observing.	State the action that the observer is taking.

Figure 3-2-4 Contact Report by Radio

RADIO WARNING ORDER - HASTY ATTACK
1. **WARNING ORDER**
2. **SITUATION**
a. Enemy. Strength and location of any enemy who could affect the attack.
b. Friendly forces. New information only. Consider security.
3. **MISSION**. To capture ... or destroy ...in order to ...
4. **EXECUTION**
a. Concept of Ops. State the end result desired, and which type of attack; frontal, left or right flanking.
b. Grouping and Initial Deployment.
c. RV.
d. Route to RV.
e. Probable H hour.
f. Time for orders.

Figure 3-2-5 Radio Warning Order for a Hasty Attack

RADIO ORDERS - HASTY ATTACK

1.   **ORDERS.**

2.   **SITUATION.** Important changes since the Wng O.

3.   **MISSION STATEMENT.** Confirm, or if necessary, alter from Wng O.

4.   **EXECUTION**

     a. Formation. (...) Flanking (...) Up

     b. Grouping and tasks. C/S (...). Grouping (...) Tasks (...).

     c. H hour. .

     d. Attack position and route.

     e. Order of march to attack position

     f. Line of departure

     g. Route

     h. Assault position

     j. Assault line

     k. Dismount area. On order from C/S (...)

     m Consolidation. (...) metres (...) (direction) of obj. C/S (...) facing (...)

     n. Fire Plan. HE /Smk GR (...) from H - (...) to H + (...) HE/Smk on obj from H - (...) to H + (...). C/S (...) authorized to check fire. DF (...) on call

     p. Zulu Harbour. Location (...) facing (...).

     q. Orders from C/S (...) follow. (Supplementary orders given by support arm)

     r. Orders end. C/S (...) acknowledge

Figure 3-2-6 Radio Orders Format for a Hasty Attack

BRIEFINGS

61.   In addition to giving orders to his section commanders, a platoon commander will, whenever possible, brief his whole platoon on the forthcoming operation. This will ensure that everyone knows the overall purpose so that even if commanders are put out of action the platoon members can still achieve the desired results. Briefings save time and inspire confidence and determination.

62.   A briefing should follow this sequence:

   a.   ground,

   b.   situation, including higher commander's intent, and

   c.   general plan, (mission statement and concept of operations paragraphs) .

63.   When the platoon commander gives a briefing, he should use a model or diagram whenever possible.

EXAMPLE OF A TIME APPRECIATION
FOR A PLATOON ATTACK

SERIAL	ACTIVITY	TIME REQUIRED	TIME (HOURS)
(a)	(b)	(c)	(d)
1	Objective to be captured by		
2	Time spent to capture objective		
3	Move from line of departure to assault position		
4	H hour is at		
5	Move from forming up place to line of departure		
6	Move from assembly area at		
7	Move from assembly area at		
8	Section commanders give orders and complete preparations		
9	Section commanders complete their battle procedures and prepare their orders		
10	Platoon commander's gives his orders		
11	Platoon commander's O Gp begins		
12	Platoon commander completes his tactical estimate and prepares his orders		

SERIAL	ACTIVITY	TIME REQUIRED	TIME (HOURS)
(a)	(b)	(c)	(d)
13	Platoon commander moves to platoon RV		
14	Platoon commander makes a reconnaissance		
15	Platoon commander makes a time appreciation, a map study and a reconnaissance plan		
16	Combat team/company commander's O Gp ends		

GUIDE FOR THE PREPARATION OF OPERATION ORDERS
BY PLATOON AND SECTION COMMANDERS

Reference: A.   B-GL-303-002/FP-000 Operational Staff Procedures,
Vol 2, Staff Duties in the Field

SER	OPERATION ORDERS		SOURCE AND COMMENTS
	HEADING	SUB-HEADING	
1	SITUATION	Enemy Forces.	Known or estimated strength, locations and actions that may affect the completion of the mission. Obtained from the **Situation – Enemy Forces** paragraph of the Combat team/company commander's orders, from reports and air photographs, and from the deductions obtained from their analysis.
2		Friendly Forces.	The company/combat team commander's intent, any troops added to or detached from the company/combat team for the operation, the tasks of flanking platoons/sections, and support weapons, and the pertinent part of the fire plan. this is taken from the **concept of operations** as given in the execution part of his commander's orders. Also, a short explanation of the combat team/company's resources as given in the **Atts and Dets** portion of the orders.
3		Atts and Dets.	Any troops added to or detached from the platoon (or section) for the specific operation. Obtained from the grouping portion of the execution paragraph of the company/combat team company commander's orders.

SER	OPERATION ORDERS		SOURCE AND COMMENTS
	HEADING	SUB-HEADING	
4	MISSION		The platoon's mission is derived from a mission analysis of the tasks assigned and of the commander's intent. the mission will be the principal task along with a statement of the purpose behind the task. It is expressed as "to… (mission task verb) in order to … (purpose)". It is stated twice for emphasis.
5	EXECUTION	Concept of operations	This is a statement of your intent which explains your mission in relation to the higher commander's intent. It consists of an explanation of the purpose of the task, a general method to achieve the task and an end result desired.
6		Groupings and Tasks: The sequence is: a. own troops; b. attachments: reconnaissance, anti-armour, assault pioneers; c. other arms in sequence of seniority (artillery and mortars treated together);	Taken from the assessment of tasks derived from an analysis of the enemy forces and you own resources including your **Atts and Dets** (relative strengths), and from other deductions derived during the analysis of factors such as terrain, time and space. Identify groupings within the platoon and section. Assign tasks, by phases if applicable, to each group. The most important task assigned is designated the main effort, and should be clearly indicated to all in this sub para.
7		Coordinating instructions:	They are instructions which are applicable to more than one group. They will derive form the deductions made during the estimate.

SER	OPERATION ORDERS		SOURCE AND COMMENTS
	HEADING	SUB-HEADING	
		a. Timings	Taken from the analysis of the time and space factor.
			Control measures include locations, boundaries, routes to various control points, order of march report lines, limits of exploitation, assembly areas, axes of advance, etc. Many will be given in the company / combat team commander's 'Orders, in his coordinating instructions paragraph.
			The platoon and section commanders will have to add control measures of their own, based on their tactical estimate and the ensuing plan. These may include platoon check points, routes, order of march, boundaries between sections, etc.
		c. Various plans such as (1) obstacle plan; (2) anit-armour plan; (3) fire plan; and (4) patrol plan	Taken from conclusions draw from the analysis of various factors such as enemy strengths and deployment, own and friendly forces resources, terrain, etc.

SER	OPERATION ORDERS		SOURCE AND COMMENTS
	HEADING	SUB-HEADING	
		d. Other points of coordination, according to the type of operation (see pertinent aide-memoirs). These may include such points as	These will usually be dictated in the combat team/company commander's orders, or in SOP.
		(1) opening fire policy;	
		(2) deception and concealment;	
		(3) sentries and alarms;	
		(4) stand-to;	
		(5) TOPP;	
		(6) patrols and Ops during the consolidation stage;	
		(7) etc	

SER	OPERATION ORDERS		SOURCE AND COMMENTS
	HEADING	SUB-HEADING	
8	SERVICE SUPPORT.	Standard items to cover are: a. ammunition; b. dress, equipment and tools; c. transport arrangements; d. medical arrangements, including location of the unit aid station and company medical assistant; e. handling of prisoners of war; f. rations and water; and g. carriage of kit	Give the administrative arrangements required to ensure the accomplishment of the mission. Many will be Standing Operating Procedures. Special requirements will derive from the deductions reached during the estimate.

SER	OPERATION ORDERS		SOURCE AND COMMENTS
	HEADING	SUB-HEADING	
9	COMMAND AND SIGNALS.	**Command.**	At platoon level, the location and moves of company HQ, platoon HQ, the company commander, and platoon commander are given. At section level the locations and moves of the platoon HQ, the platoon commander and the section commander are given.
		Signals: a. radio frequencies; b. codewords; c. special signals such as whistle, light or field signals; d. nicknames and other reference points; and e. password	
10			QUESTIONS. The platoon/section commander should answer questions and may even question his O Gp to ensure that the plan is understood.

CHAPTER 4

MANOEUVRE

SECTION 1

GENERAL

1.   Manoeuvre is the employment of forces on the battlefield in combination with fire to achieve a position of advantage in respect to the enemy in order to accomplish the mission. Its proper application will permit the combat power of the section and the platoon to be focused on a point where the enemy is weak so that the section or platoon can close with and destroy the enemy while sustaining minimum casualties.

2.   As the rifle section will seldom operate independently, it will usually not have to rely solely upon inherent fire support except during the final stages of an assault. Similarly, a platoon may move as a complete body, supported by company or battalion resources. When the platoon is to operate independently, the platoon commander must manoeuvre using inherent fire support and indirect fire support (artillery or mortars).

3.   This chapter will cover dismounted and mounted techniques and drills and the elements of fire support.

4.   All fire and movement techniques and drills should be performed with adherence to the following basic principles:

   a.   Control is a function of the commander. He must be able to positively influence the battle without becoming decisively involved in it.

   b.   Speed is the essence. It directly lends to momentum and takes initiative away from the enemy.

c. Arcs of fire should be as wide as possible without loss of time or control.

d. Movement should maximize the use of ground considering:

   (1) cover from enemy observation,

   (2) protection from enemy fire,

   (3) the use of friendly covering fire including smoke, especially when in the open, and

   (4) the necessity to remain within boundaries.

SECTION 2

TACTICAL MOVEMENT TECHNIQUES

THREAT ORIENTED

1. The threat of enemy contact is a major factor when determining the technique, the movement formation and speed of movement. Moves can be executed under the three following types of conditions:

a. **Contact Possible.** Movement in secure areas where contact with the enemy is possible but unlikely, should be conducted in as quick and efficient a manner as possible. The commander must be constantly conscious of the threat of enemy action by ambush, indirect fire or air attack, even in rear areas, and he must react effectively to such contacts. When in doubt as to the threat, a commander should employ tactical movement techniques.

b. **Contact Imminent.** When moving under conditions of imminent enemy contact, the commander must select his route carefully, considering any probable positions of observation and fire available to him and to the enemy. He should avoid areas that are likely to be covered by enemy observation and fire. The movement technique that he chooses should afford him a proper balance between the requirement for speed, protection, the effective use of fire power, and ease of control.

c. **In Contact.** When in contact with the enemy, the commander should first neutralize enemy fire and move using terrain that affords protection from fire. In these circumstances the commander should employ either the Platoon Supported Movement or Section Bounds technique.

TECHNIQUES

2. A movement technique is the manner a platoon uses to traverse terrain. There are three platoon movement techniques: Platoon

Unsupported Movement, Platoon Supported Movement, and Section Bounds. The selection of a movement technique is based on the likelihood of enemy contact and the need for speed. Factors to consider for each technique are control, dispersion, speed and security. Movement techniques are not fixed formations, they are the methods used by a commander to ensure he has the right balance between fire and movement capabilities, to allow him to manoeuvre on the battlefield. Any of the three techniques can be used with any formation, mounted or dismounted.

3.   **Movement Techniques**. The three platoon movement techniques are defined as follows:

   a.   **Platoon Unsupported Movement**. This method is used when the threat of enemy contact is low. The Platoon Unsupported Movement allows the platoon to move as one body without "a leg on the ground" and unsupported by company direct fire support elements.

   b.   **Platoon Supported Movement.** This is used when contact is probable. It allows the platoon to move as one formation, supported by company direct fire elements or the platoon weapons detachment.

   c.   **Section Bounds**. This is used when contact is imminent and calls for the movement of one or two sections covered by the remainder of the platoon.

SELECTION OF LINES OF ADVANCE

4.   **Considerations**. The best lines of advance are those that provide the best positions for observation and fire, and the best protection from those of the enemy.

5.   The two do not usually go together. Good observation posts and fire positions are usually on high ground, whereas covered lines of approach through dead ground to the enemy render direction keeping difficult.

6.   The commander must decide where to make for, the best route to get there, when to walk, run or crawl, and how to react to enemy fire. The lines of advance which he chooses must permit him to move without being observed so as not to permit the enemy to anticipate his direction of approach. Smoke should be used to mask moves in the open.

7.   **If** chances **must** be taken, they should be taken early during the approach, and covered approaches should be used when near the enemy position. Details for selection of lines of advance are contained i n B-G L-318-001 /PT-001.

8.   The ideal line of advance provides:

   a.   places from which to observe without being seen;

   b.   good fire positions;

   c.   movement free of enemy observation;

   d.   cover from enemy fire; and

   e.   freedom from obstacles to movement (open ground, swamps, etc.).

9.   **Study of the Map.** The selection of lines of advance is largely a matter of map reading. The area to be studied must be wider than the area to be crossed or occupied and it should include all potential approaches and probable positions that dominate them. The terrain should be analyzed using the mnemonic **GROUND,** as follows:

   a.   **General.** The map should be studied to get an idea of the general character of the area. It may be open or close, rolling ground, flat pasture or wooded.

   b.   **Ridges.** All streams and the lowest parts of valleys and reentrants should be marked on the talc. The highest parts of

ridges and spurs should be marked with single lines of another colour.

    c. **Observation**. Mark good positions of observation.

    d. **Undergrowth**. Mark woods and belts of trees.

    e. **Non-passable**. Mark rivers, canals, railways and villages.

    f. **Defilade**. Mark covered lines of advance and areas that give cover.

10.   The commander should now have a clear general picture of the ground and a good idea of its possibilities and limitations. He may even be able to make an estimate of the enemy's positions and courses of action, and choose an appropriate movement technique to close with the enemy.

11.   Reconnaissance for Lines of Advance. When making his reconnaissance plan in view of choosing lines of advance, the commander must know what he is looking for, and how to look for it. He must choose a point of observation which will afford him the best view of the terrain for his reconnaissance. He should restrict his reconnaissance to essential elements of information such as:

    a. known and probable enemy positions; and

    b. obstacles and evidently dangerous areas, such as know DF tasks.

12.   It is not necessary that the commander selects the whole of a line of advance from the original observation point. He should choose a general line of advance, modifying it at each bound, if necessary.

13.   When the platoon commander orders a section commander to complete a flanking movement, he should indicate the general direction to be taken, and rely on him to use his skill and judgement.

SECTION 3

SECTION FORMATIONS

GENERAL

1.   The basic section formations are detailed below. Formations are based on a dismounted section of eight soldiers; and they do not include the vehicle group. Additional formations can be developed by the section commander to cater to special circumstances. Whenever a commander uses a tactical movement technique, basic section formations should be used.

FORMATIONS

2.   **Single File**. The section uses this formation when moving in close country, when following linear features such as hedges and walls, or when moving in rear areas. It can be used by depth sections when enemy contact is not imminent. Its advantages and disadvantages are:

   a. **Advantages**:

       (1) It permits maximum fire power to flanks.

       (2) It affords good control, especially at night.

       (3) It permits faster movement.

       (4) It simplifies the crossing of obstacles.

   b. **Disadvantages**:

       (1) It affords minimum observation and fire to the front.

       (2) The group is very vulnerable to head-on fire.
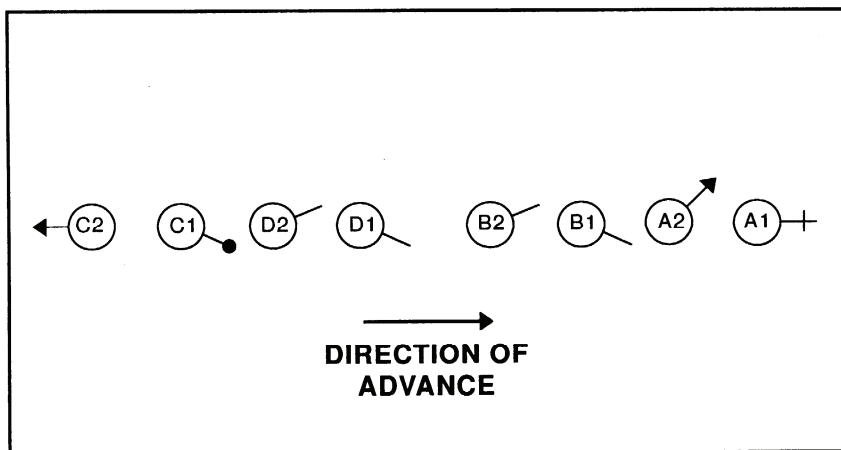
NOTE: The section commander can modify the layout as he sees fit.

Figure 4-3-1 Single File Formation

3.   **Loose File.** This is the best formation for advancing under conditions where the commander wants maximum control and also the ability to react to any number of situations. It is also good for movement as part of a company or battalion formation.

    a . **Advantages**

        (1) Permits very good control, even at night.

        (2) The section can cover both flanks well.

        (3) It allows fast movement.

        (4) It allows easy change into other formations.

    b. **Disadvantages**

        (1) It affords limited fire power to the front.

(2)   The group is vulnerable to head-on fire (although less than single file).
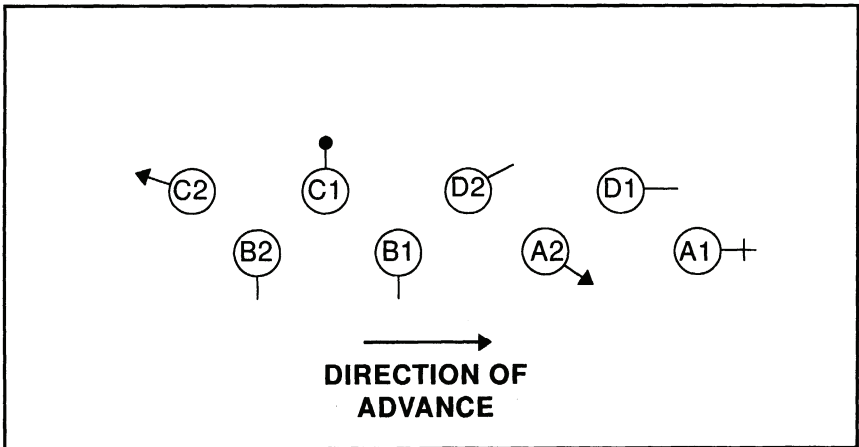
Figure 4-3-2 Loose File Formation - Section

4.   **Arrowhead.** This formation is useful when advancing across open country using Platoon Supported Movement or Section Bounds techniques.

a. **Advantages:**

(1)   It affords excellent observation and fire-power to the front.

(2)   The section is less vulnerable to head-on fire.

(3)   It permits the section to cover its flanks.

b . **Disadvantages**

(1)   Control is more difficult.

(2)   Movement is slower.

(3)   The group is vulnerable to enfilade.
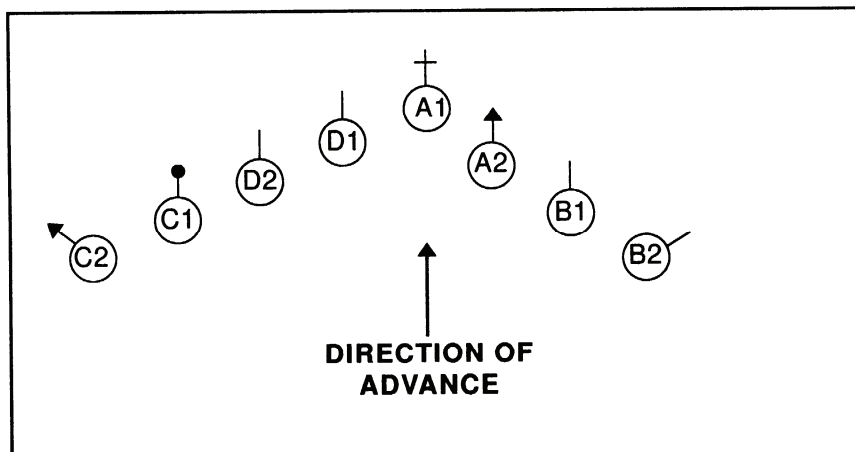
Figure 4-3-3 Arrowhead Formation

5.   **Diamond.** This formation is used by an isolated section to form all-around defence when halted, such as during a patrol. It also can be used when crossing open terrain at night and for escorting VIPs or PWs.

    a . **Advantages**

       (1) It is easy to control.

       (2) It permits all round fire and observation.

    b.   **Disadvantage.** If the section becomes too concentrated, it presents a vulnerable target.
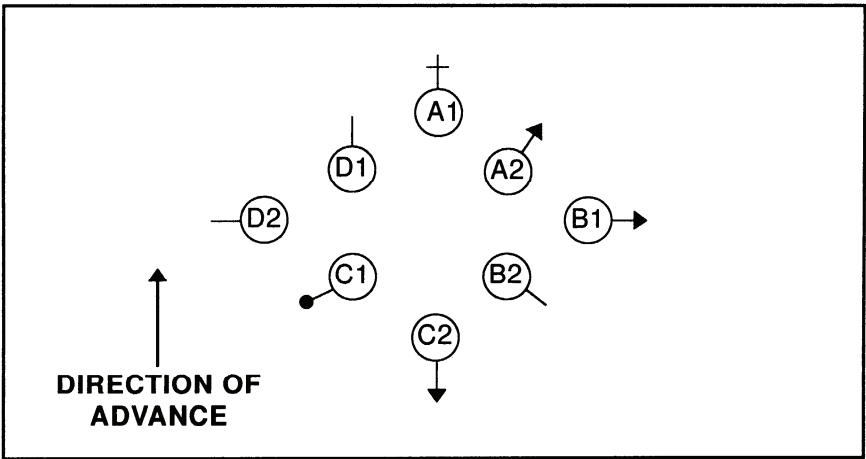
Figure 4-3-4 Diamond Formation

6. **Extended Line.** The section uses this formation to sweep an area, to cross linear obstacles, during an assault and during a withdrawal in contact. The section can advance or withdraw by groups or teams, or as one body. It is a good formation for use in Platoon Supported Movement or Section Bounds.

    a. **Advantages:**

       (1) Control is easy.

       (2) It permits maximum observation and fire power to the front.

    b. **Disadvantages**

       (1) The group is vulnerable to enfilade.

       (2) It offers limited fire and observation to the flanks.
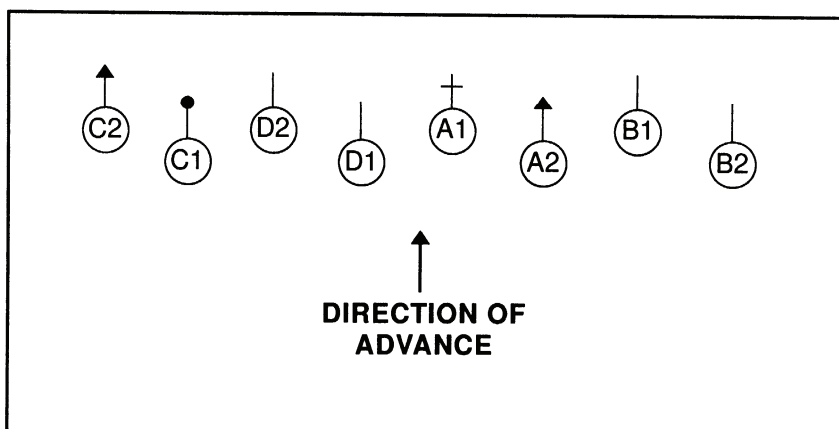
Figure 4-3-5 Extended Line Formation

7.   **Changing Formations.** The section commander will be continuously evaluating the ground and the enemy situation, and he must be prepared to change formations as the situation dictates. All changes of formation should be executed at the double, except at night or when stealth is required. His decision will be based on his estimate of the factors listed hereunder.

    a. ground,

    b. visibility,

    c. control,

    d. estimated direction and distance of enemy,

    e. speed required,

     f. indirect fire threat, and

    g. air situation.

8.   **Spacing.** The distance between soldiers must be a balance between the requirement for control and the need to reduce vulnerability to enemy fire. As a rule, soldiers should keep a distance of five metres during daylight. At night, or during reduced visibility, or in thick woods, they should close to visual contact distance. It is important that each soldier maintain visual contact with his partner, and that he remains in voice contact with his group leader.

9.   **Arcs of Responsibility.** The commander assigns a specific arc of responsibility to each soldier to ensure that the section can observe and engage all probable enemy locations. When operating independently, or on an open flank, the section commander must ensure that arcs of responsibility include the flanks and rear.

FIELD SIGNALS

10.   **Hand Signals.** The order to change formations is usually given by hand signal. These are shown in the insets of Figures 4-3-1 to 4-3-5. Other hand signals that can be used to pass simple orders and messages are at Annex A. Hand signals may be used singularly or in combination to create a sign language. While maintaining observation over his arc of responsibility, each soldier must remain alert for hand signals by regularly (every 10 to 15 seconds) glancing at the soldiers beside him and at the section commander. Hand signals should be repeated by each soldier to ensure that the entire section receives the message. Similarly, the section commander must remain alert for hand signals from the platoon commander. He may do this by detailing a soldier to maintain visual contact with the platoon HQ.

11.   **Whistle Signals.** While hand signals help to save time and voice, a commander must still give his fire control and assault orders orally. When under fire, it will often be difficult to get everyone's attention. A whistle blast will help. Whistle blasts also can be used to signal the beginning of an assault, success, consolidation, movement of a covering group, stand-to, etc. Whistle signals should be kept short and simple; detailed orders, using a series of short and long blasts, should be avoided. Signals should be detailed in company SOPs.

12.   **Mounted Signals**. Most field signals can be used when mounted. Additional signals applicable to vehicle operations are found at Annex B. Ground guides may use the night signals shown at Annex C.

SECTION 4

PLATOON FORMATIONS

DISMOUNTED FORMATIONS

1.   The basic dismounted platoon formations are detailed in Figures 4-4-1 to 4-4-4. Section commanders may employ different formations within their sections, while maintaining the same relative platoon formation depending on the movement technique being employed. Spacing between sections will be governed by the requirement for control by the platoon commander balanced against the necessity for dispersal to avoid casualties. The platoon commander should avoid getting all three sections engaged simultaneously, depriving him of his ability to manoeuvre.

2.   **One-Up.** One-up is used in open country when the enemy's location is unknown. It leaves most of the platoon uncommitted. It is applicable using Platoon Unsupported Movement or Supported Movement techniques.
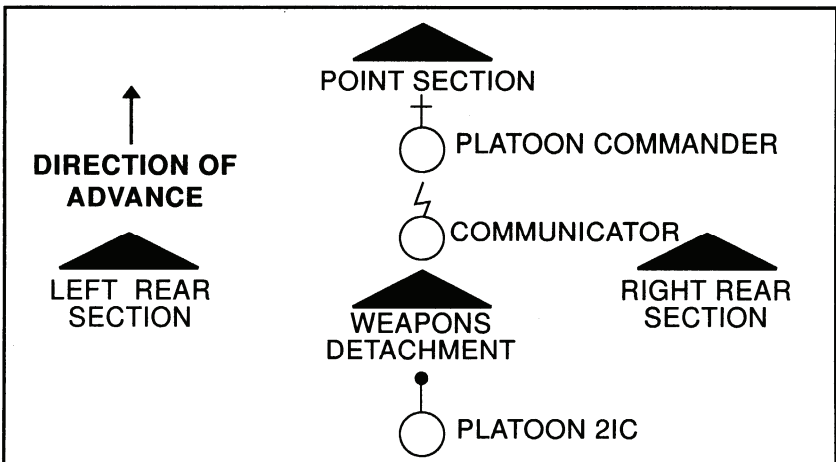
Figure 4-4-1 Dismounted Platoon Formation - One Up

3.   **Two-Up.** Two-up is used in open and close country to cover a wide frontage, and during the assault when two sections are required on the objective. It permits a maximum amount of fire-power forward, but leaves the platoon commander with only a small reserve. It is applicable in all movement techniques and is the best formation to conduct Section Bounds technique.
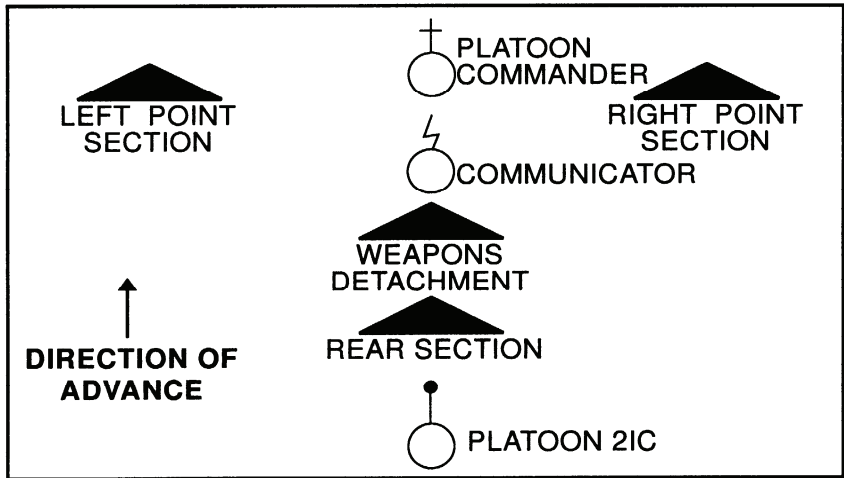
Figure 4-4-2 Dismounted Platoon Formation - Two Up

4.   **Column.** The platoon can use this formation for moving along a linear feature, such as a ridge or trail. It permits easy control and allows for fast movement, but it is vulnerable to head-on fire and ambush. It is applicable when Platoon Unsupported Movement and Supported Movement techniques are employed.

LEAD
SECTION *

← **DIRECTION OF
MOVEMENT**

PL COMDS   WPNS DET   CENTRE   REAR   PLATOON
PARTY   SECTION   SECTION   2IC

* May be in arrowhead, single or loose file,
  depending on the ground and threat.
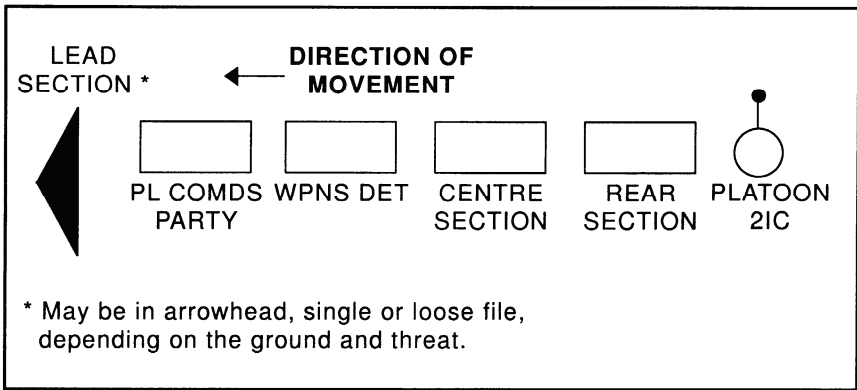
Figure 4-4-3 Column

5. **Loose file formation.** The platoon may use this formation for advancing along a road or track. The company may use it for moves when contact with the enemy is not imminent. It decreases the platoon's vulnerability to fire, but allows for quick deployment to other formations. Control is more difficult on a wide road. It is applicable using Platoon Unsupported Movement technique.
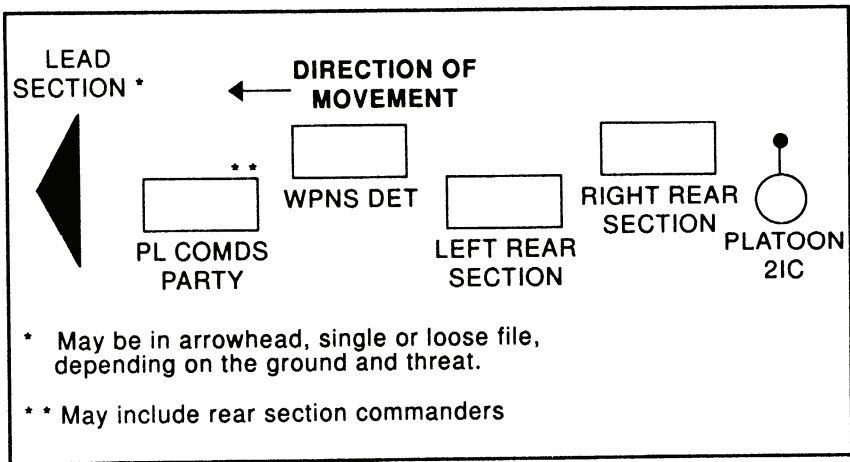
Figure 4-4-4 Loose File Formation - Platoon

6.   While in column or loose file formation, the platoon commander may wish to keep the rear section commanders close behind him that they may be easily available for orders upon contact. This group is known as a "floating Orders Group".

MOUNTED FORMATIONS

7.   The basic mounted platoon formations are shown in Figure 44-5. The platoon commander may order changes in formations using hand signals, as illustrated in Annex B. He should establish Standing Operating Procedures for the movement of vehicles between formations and for changing arcs of responsibility.

8.   **Extended Line.** The platoon may choose this formation during crest drills. ZULU vehicles may adopt it to provide fire support. It permits easy control and provides maximum fire-power to the front but it leaves the platoon vulnerable to enfilade. Also, it lacks depth.

9.   **Box Formation.** The platoon may adopt the box formation when crossing open country when contact is imminent. It favours good dispersion, and provides for all around fire and observation.

10.   **Echelon Left/Right**. Echelon formations permit increased observation and fire to an open flank.

11.   **Column**. The platoon may choose this formation when advancing along a linear feature, when passing through a gap and for administrative moves. It permits easy control, especially at night, and allows for fast movement. It leaves the platoon vulnerable to head-on fire and ambush.

12.   **Three Up T**. This formation may be used during the assault. It is easy to control, allows most of the platoon's fire-power to be directed onto the objective and provides depth to the assault. It is vulnerable to enfilade.

EXTENDED LINE

BOX *

ECHELON RIGHT

ECHELON LEFT

COLUMN

THREE UP T
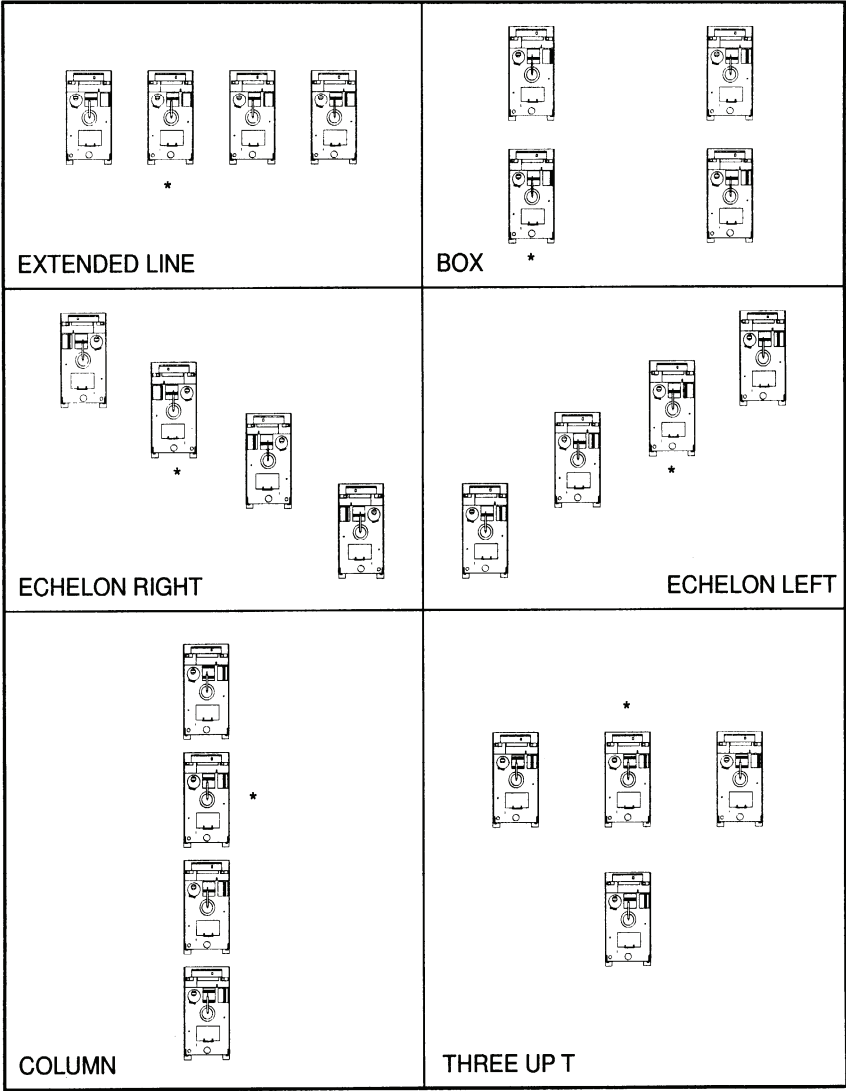
* DENOTES PLATOON COMMANDER'S

Figure 4-4-5 Basic Formations at the Platoon/Troop Level

13.   **Combat Team Formations**. The combat team commander directs the troops/platoons into their relative positions in the combat team formations. The platoon/troop commanders select the formation that best suits their task and the ground. Two possible formations are shown at Figures 4-4-6 and 4-4-7.
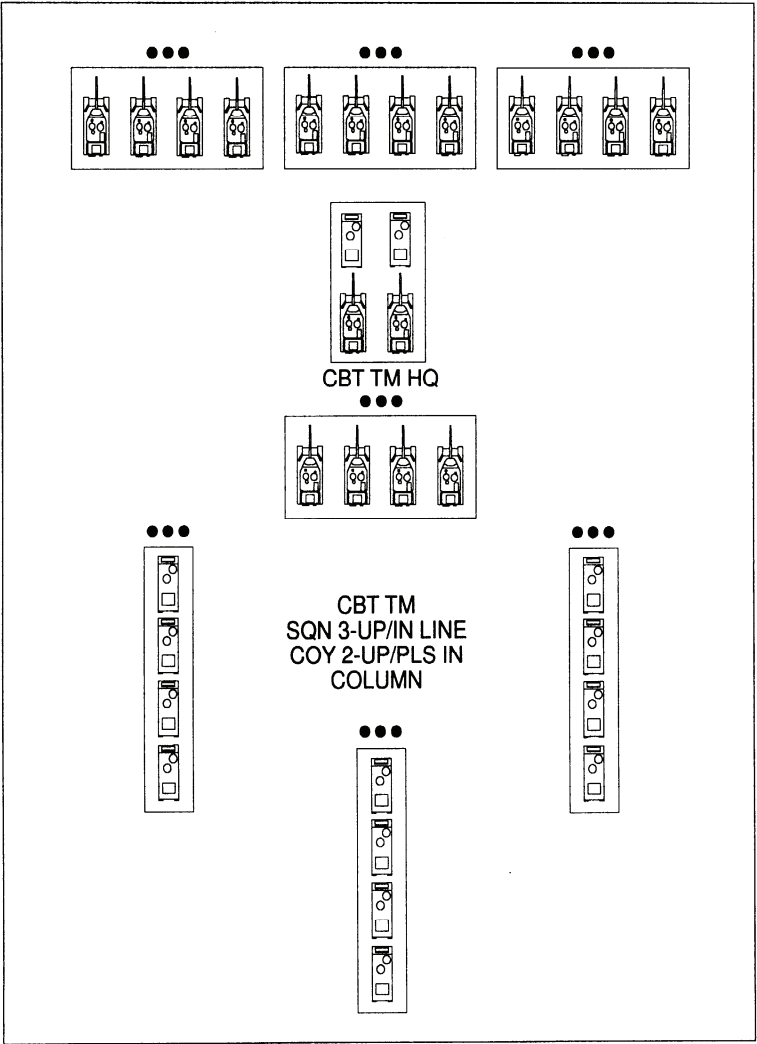
Figure 4-4-6 Combat team. Squadron, Three up in Line. Company, Two up, platoons in Column.

CBT TM
SQN BOX/TPS IN BOX
COY COLM/PLS IN BOX

CBT TM HQ
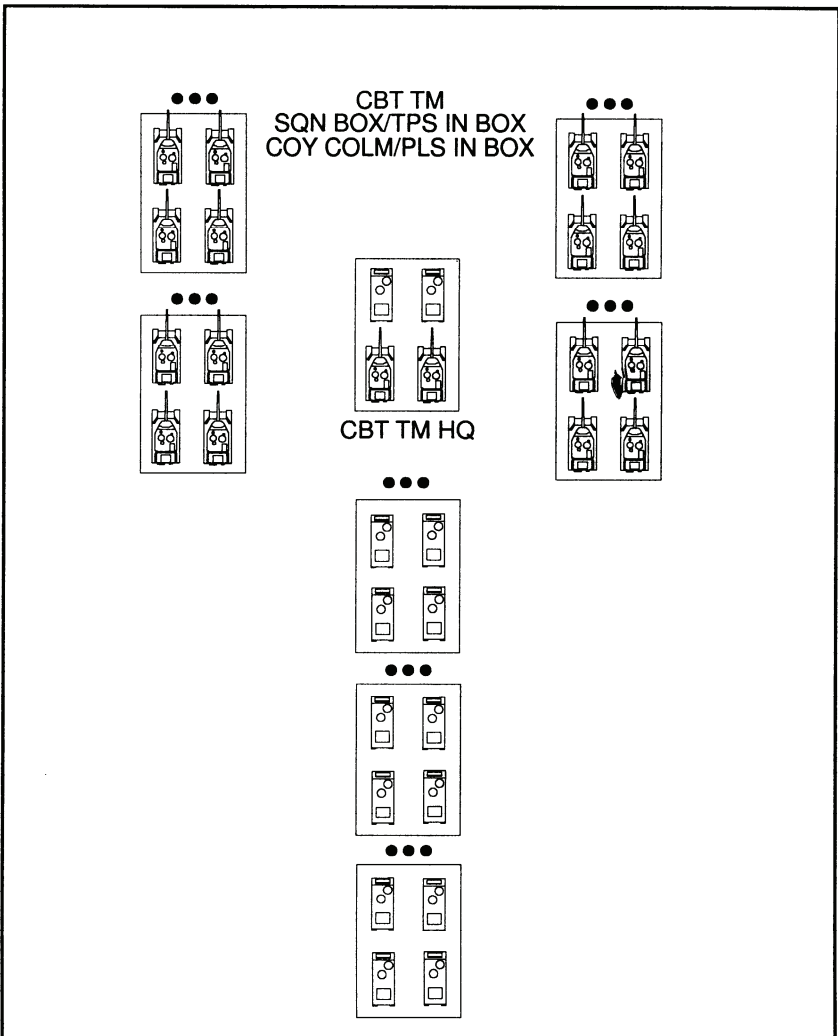
Figure 4-4-7   Combat team. Squadron in box formation with troops in box formation - Company in column with platoons in box formation.

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SECTION 5

TACTICAL MOVEMENT DRILLS

SCOUTS

1.		During dismounted operations in close country, where visibility is limited or where the threat of surprise is great, the platoon commander may consider the use of scouts to the front, flanks or rear. If speed is essential, it may not be feasible to employ scouts to the front.

2.		The aim of a scout is to see without being seen, and in so doing provide early warning and security for his platoon. Scouts should work in pairs, and should come from the same fire team. Scouting is dangerous, and is mentally and physically exhausting; thus the platoon commander must consider the requirement to rotate scouting pairs whenever possible and feasible.

3.		**Movement**. Scouts operate using fire and movement, one always covering the other from a position of fire and observation. Bounds must be long enough that the scouts can see farther than the lead section commander and platoon commander, yet not so far that the moving scout cannot be supported. The rear scout is responsible for maintaining contact with the forward section.

4.		Depending on the need for speed and stealth, scouts can move slowly, at the double or a combination of the two. Movement techniques are as follows:

	a.	**Caterpillar**. The rear scout moves to a position close to the lead scout but not past him, thus allowing the lead scout time to observe and to plan his next bound (Figure 4-5-1).

	b.	**Leapfrog**. The rear scout moves one bound past the lead scout; this method does not allow the lead scout to plan his next bound, but it is faster than the caterpillar method (Figure 4-5-2).

5.   **Drills.** The movement drill for both methods is as follows:

a.   the moving scout picks out his next bound, and his route to it, ensures that his partner is covering, and moves;

b.   the covering scout keeps visual contact with the moving scout as much as possible, while maintaining observation to the front and flanks;

c.   when the moving scout reaches his bound, he takes a position of fire and observation, and signals his partner when he is ready to take over as covering scout;

d.   the covering scout glances to his rear to see if there are any signals from the lead section, then sets off as the moving scout;

e.   when contact is made with the enemy, an obstacle or a danger area, the scouts must pass this information back to the platoon commander as quickly as possible, usually via hand signals; and

f.   the platoon commander will decide whether to move forward to recce himself, recall one or both scouts, direct them to maintain observation, or to carry on.
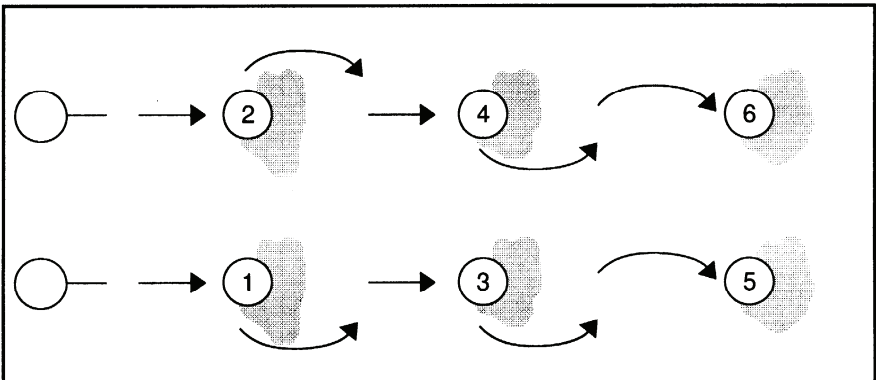
Figure 4-5-1 Scouts - Caterpillar Movement
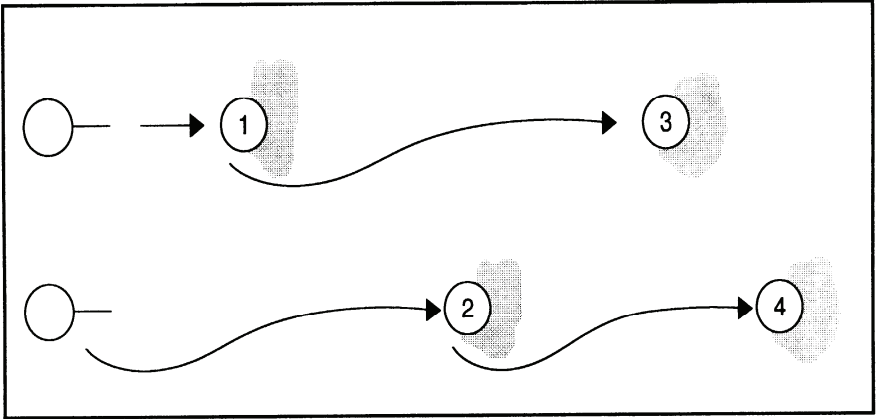
Figure 4-5-2 Scouts - Leapfrog Movement

DISMOUNTED MOVEMENT DRILLS

6. Platoons on the move must always be alert and ready to react instantly to enemy action. When moving in areas where the enemy's location is unknown, the platoon should employ scouts in front and on the flanks. Commanders should continuously check the ground ahead and confirm whether or not they are using the proper movement techniques and formations. They must be particularly sensitive to danger areas. A danger area is any place where the section or platoon might become exposed to enemy observation and fire. Types of danger areas include:

    a. open areas,

    b. large roads or streams,

    c. villages,

    d. defiles and gaps, and

    e. minefields and wire obstacles.

7.   **Danger Area Drills**. When a platoon must quickly cross a danger area, the commander should employ Platoon Supported or Section Bounds movement techniques. Unless speed of movement is essential, the platoon should employ the following drill:

   a.   ensure the weapons detachment and/or a section is in position to cover moving sections fully across the danger area;

   b.   bypass minefields and wire obstacles if possible;

   c.   cross streams in places that offer concealment;

   d.   avoid use of roads and trails;

   e.   pass villages on downwind side; and

   f.   ensure direct fire support is available.

8.   **Contact Drills**. Depending on the mission, the platoon will react to enemy contact on the move by performing aggressive quick attack, counter ambush drills or break contact drills. Battle drills and quick attack drills will be covered in the following chapter. Counter-ambush drills are covered in chapter 10.

TANK-MECHANIZED INFANTRY MOVEMENT DRILLS

9.   The tank troop, when moving unsupported, uses standard drills to negotiate both natural and artificial obstacles. By taking part in the drills, the platoon may add both speed and security to them. These drills work best when the platoon commander is paired off to work with the troop leader.

10.   Drills are divided into two categories:

   a.   "Held up" drill. The troop/platoon is held-up by a natural obstacle such as a defile, blind corner, gap or crest.

b. "Contact" drill. The troop/platoon makes contact with the enemy or an obstacle such as a road block or minefield, which one must assume is covered by fire. These are drills in the sense that there is a standard sequence of action, since each different obstacle calls for a different plan to overcome it. They are in fact troop/platoon operations but for clarity the term "Contact Drills" will be used. The use of speculative fire, while not a "drill" in the same sense, continues at all stages of troop/platoon tactics both in battle drills and during fire and movement. Speculative fire may also be used by the APCs.

"HELD-UP" DRILLS

11.   Not every defile, blind corner, gap or crest will contain an enemy. However, these natural obstacles may provide the enemy opportunity to surprise a concentrated or exposed target. Such sites are the likely locations near which to expect the enemy and its logical to take precautions. The troop/platoon may apply the following drills, adjusting them as necessary to fit the ground.

a. **Blind Corner Drill** (see Figure 4-5-3)

(1)   The leading tank of the troop on approaching a blind corner will report "Held-up, blind corner right (or left)". The two leading tanks will then edge their way forward. Their final positions should be such that the inside tank is not exposed to the new direction, and the outside tank (which will probably be slightly ahead of it) can see part-way around the outside of the corner. There should be no criss-crossing of tanks on approaching the corner.

(2)   The troop leader and platoon commander both acknowledge the report of the lead tank. If there is no way of avoiding the corner, the troop leader or platoon commander proceeds with the drill.

(3)   The platoon commander despatches one section forward, to dismount and reconnoitre around the corner and then moves

forward to view the action. The remaining APCs stay together under cover of the rear tanks, and cover the rear of the troop/platoon. If contact is made, then the drill is halted immediately and a plan must be made to overcome the opposition. The drill is not a substitute for a plan.

(4) The section ordered to execute the recce halts near the leading inside tank, dismounts, and reports. The two leading tanks. must now exercise strict fire control. The leading outside tank should now be in a position where it can see around the corner, and support the dismounted section.

(5) The section leader, being out of radio contact upon dismounting unless he takes a manpack radio with him, quickly moves a man into position H, where he establishes visual contact with the lead outside tank and can give early warning of contact.

(6) The lead outside tank can quickly inform the platoon commander if the section gets into any difficulty. Depending upon the nature of the corner, the platoon commander may have to dismount more than one section for the reconnaissance task. However, he must not overlook the number of such obstacles which may exist along the axis. If he dismounts his whole platoon at each obstacle, the drills will be slower and the platoon may be unduly tired before contact is made.

(7) The dismounted section, having determined that the corner is clear, signals this information to the lead tank where it is relayed to the troop leader.

(8) The troop leader then orders the leading tanks around the corner. The two lead tanks round the corner together. If one is fired upon, the other can return the fire. If the two lead tanks get past the corner without incident, the other two move around the corner in the same manner and the advance continues.

(9)   The platoon commander moves his APCs around the corner in any convenient formation. The dismounted section is picked up by its APC which has now moved around the corner with the platoon.
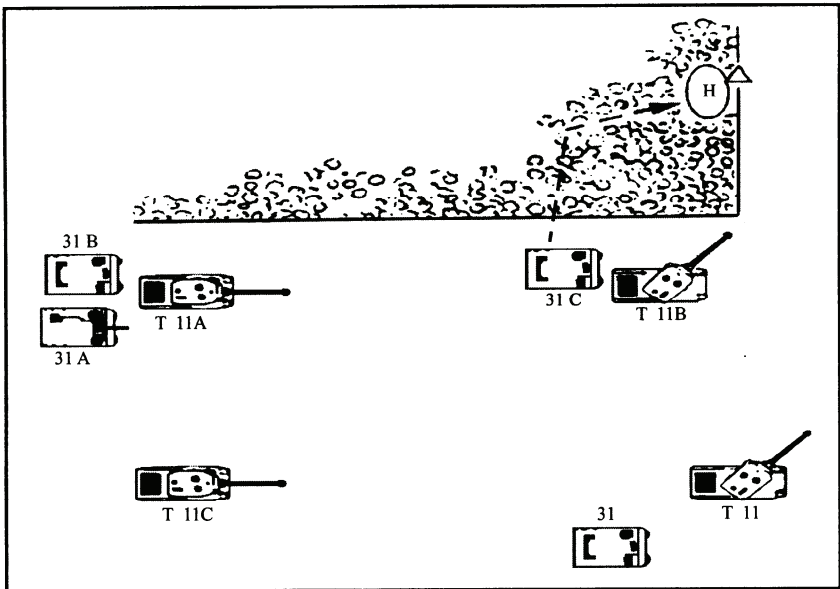
Figure 4-5-3 Blind Corner Drill (reconnaissance phase)

Notes: 1 .   Leading tanks T11 and T11B in position to support dismounted section 31 C.

2.   Platoon Commander co-located with T1 1 to a position of observation.

3.   The dismounted section leader sends a rifleman to position H to establish visual contact with T1 1.

4.   Remaining tanks and APCs remain back under cover.

5. T11 B is ready to move around the corner with T1 1 upon "all clear".

b. **Defile Drill** (see Figure 4-5-4):

(1) The leading tank, on approaching a defile, reports "Held-up defile" and moves into a position from which he can observe the defile and report back details. The troop leader and platoon commander acknowledge the report. If there is no way of avoiding the defile, the troop leader reports that fact to the combat team commander and carries on with the drill.

(2) The troop leader moves his tanks into positions to cover the defile. The platoon commander designates a section to go forward, dismount and reconnoitre the defile. He moves his own APC into a position of observation. The other APCs remain under cover and protection to the rear of the troop/platoon.

(3) The section moves up near the leading tank, dismounts (so reporting) and moves forward to check the defile. Depending upon the detailed report from the lead tank, and his own subsequent observation, the platoon commander may have to designate more than one section to check the defile. Again, strict fire control must be maintained by the tanks once the infantry dismount. The dismounted section must maintain visual contact with the lead tank.

(4) When the section signals that the defile is clear, the troop leader moves one or two tanks through, covered by the others. Once through and in position on the far side, the troop leader moves his tanks through, followed by the platoon in its APCs. The advance is resumed and so reported. If contact is made at any stage, the drill stops and a plan is made.
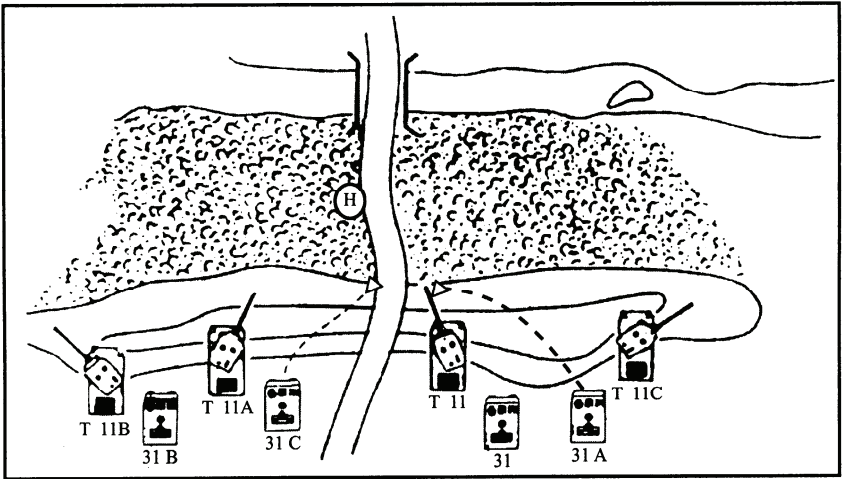
Figure 4-5-4 Defile Drill (reconnaissance phase)

Notes: 1 .   T11, T11 A, T11 B and T11 C, in position .to cover defile and high ground beyond with fire.

2.   Sections 31 C and 31 B dismount and recce defile.

3.   Platoon commander and troop leader in a position of observation.

4.   Remaining sections remain under cover and protect the rear.

5.   Dismounted section maintains visual contact with T1 1 by rifleman at position **H .**

c. Gap Drill. (see Figure 4-5-5)

(1)   The leading tank, on approaching a gap, reports "Held-up, gap right (or left)", and moves into a fire position from which he can observe and report. The troop leader and platoon commander acknowledge the report.

(2) If the troop leader sees that there is no way of by-passing the gap, he proceeds with the drill.

(3) The troop leader orders his tanks into fire positions where they can cover the next bound beyond the gap. The platoon commander orders a section to the near edge of the gap to dismount and reconnoitre. He moves his own APC to a position of observation. The remaining APCs stay back under cover and protection of the rear troop/platoon.

(4) The section dismounts, reports and checks the gap, establishing visual contact with the nearest tank. Tank cease any further speculative fire into the gap, concentrating to the front or other flank.

(5) When the "all clear" is given, the troop and platoon move past the gap onto the next bound. The troop leader has several options open to him in deciding how to make this move:

    (a) He may or may not lay smoke in the gap as added assurance. This will depend upon wind, time, and the danger of drawing attention by using smoke.

    (b) He may move past using fire and movement or, depending on the threat from the front, may move his whole troop past the gap together.

    (c) Depending on which of these methods are used, the platoon may move past after the tanks, or with the tanks using them as an added screen. Provision must be made for picking up the dismounted section before crossing the gap or on the far side of the gap to avoid a single APC passing the gap without protection.
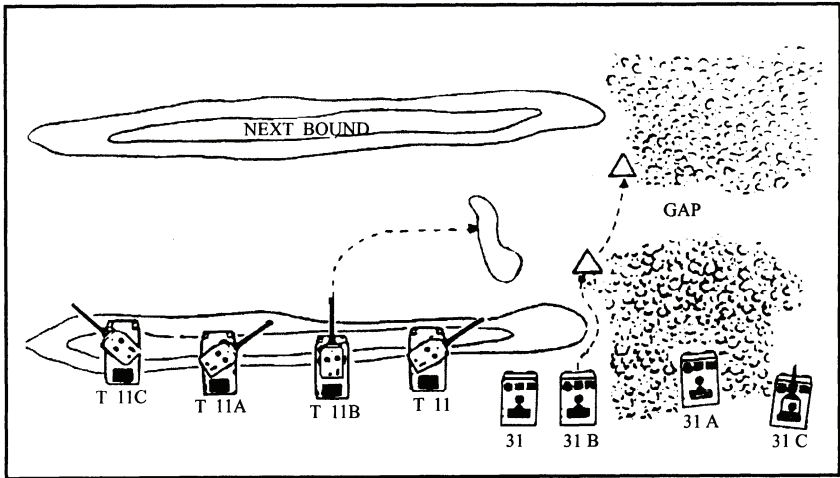
Figure 4-5-5 Gap Drill

d. **Crest Drill** (see Figure 4-5-6):

(1) The leading tank, on approaching a long unbroken crest, reports "Held-up, crest" and moves into a fire position. The lead two tanks adopt a turret down position on the crest. The remaining two tanks then join them in a turret down position on the crest. From turret down positions they search the ground beyond the crest and make a crew commander's appreciation. If no enemy is spotted, the troop reverses and jockeys away.

(2) Two tanks continue over the crest while two remain in hull down positions to cover their move.

(3) Ideally all four tanks should break the crest at the time. This way they confuse the enemy momentarily by providing a number of targets when the two tanks crossing the crest are most vulnerable. When the first two tanks are in position on the next bound the other two jockey and cross the crest.

(4)   The platoon commander, having moved his APCs up to see the ground in front, now orders them forward. The fact that the tanks did not draw fire does not necessarily mean that the APCs will not; their lighter armour may be engaged at greater ranges. The platoon commander, therefore reverses the APCs back below the crest; all four move forward crossing the crest together and move at best speed to the next bound.

(5)   In some instances the platoon commander may assist deceiving enemy gunners by moving his APCs up into positions of observations at the same time as two leading tanks are approaching.
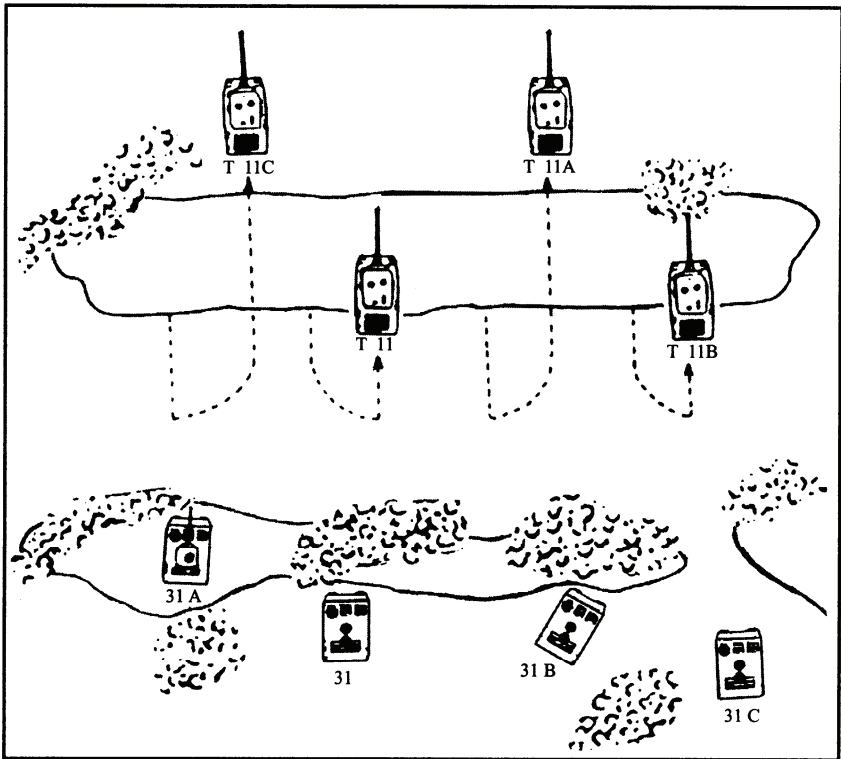
Figure 4-5-6 Crest Drill

e. **Standard Sequence of Action - Held-up Drills.** It will be noted that in all four held-up drills the sequence of action is identical:

(1) Warning. The lead tank reports "Held-up etc, etc". The troop leader and platoon commander both acknowledge as does the combat team commander.

(2) Security. Tanks move into fire positions. Uncommitted APCs get under cover and protect the rear of the troop/platoon. The platoon commander moves up to a

position of observation, normally in proximity to the troop leader.

(3) Reconnaissance. A section (or more if required) moves forward, dismounts, and checks the obstacle. In the case of the crest, the reconnaissance is carried out by the troop leader and the platoon commander themselves, without dismounting. In the other three drills, while the detailed dismounted recce is done by a section (or more), the troop leader and platoon commander, in fact, are looking at the obstacle itself from their vehicles to decide on what variations to the standard drill may be necessary in that particular instance.

(4) Plan. If the obstacle is such that the basic "held-up" drill will be sufficient, then the drill is implemented. Modifications which may be dictated by the nature of the obstacle or the ground are ordered. If contact is made, the drill stops, and a plan must be made to overcome the enemy. In all cases the nature of the obstacle, degree of risk and time available will influence the decision to carry out the drill, or "presson". The combat team commander will be well-forward observing the leading troop and will issue the necessary orders if the drills are disrupted or delayed.

"CONTACT" DRILLS

12.   Contact drills deal with situations where the enemy is encountered. No two tactical situations will be similar enough to attempt to establish a drill in the same sense as those designed to overcome natural obstacles. Nor should there be any attempt to substitute a drill, when in fact a plan is required.

13.   One procedure that may be established however, is a standard sequence of action which precedes the formation of a plan. Thus all members of the team know what the priority of action is, and are ready to follow a standard sequence of events. Some of the more common situations involving contact with the enemy will be dealt with below.

14.   Each drill illustrates a standard approach that may be taken to arrive at a plan. The situations covered are: under fire; a roadblock, and a minefield. The standard approach to all of these situations is the same as that employed in the case of "held-up" drills, that is: warning, security, reconnaissance and plan.

15.   At one time, a village drill was employed. However, weapon sophistication and urban expansion in probable areas of operation have increased to such an extent that this drill can no longer be treated as such. The use of tanks in built-up areas is covered in B-GL-305001 /FT-001 and i n B-G L-302-006/FT-001.

   a. **Under Fire**

      (1 -) <u>By Indirect Artillery or Mortar Fire</u>. The sub-units affected will move on as quickly as possible, using available cover, to get clear of enemy fire controllers. Speculative fire from all available weapons will be applied to any likely enemy observation posts.

      (2)   <u>Engaged by Small Arms Fire</u>. The combat team will increase speed and attack the enemy position without delay, using all available covering fire, unless such action would prejudice the team's primary mission. In terrain that precludes a mounted assault, the tanks will provide continued fire support, while sufficient infantry to carry out the task dismount and clear the position.

      (3)   <u>Engaged by Anti-tank or Tank Fire</u>. In open country the APCs will drive for any available cover, probably using smoke. The tanks will immediately carry out their standard anti-tank drill. In close country both tanks and APCs will get into cover. The tanks will manoeuvre into position to engage likely enemy antitank gun positions with speculative fire while the infantry prepare a dismounted assault to clear the enemy position.

b. **Roadblock:**

(1) The lead tank, on observing a roadblock, reports "Contact, roadblock", gets into a fire position where he can use speculative fire and sends back a detailed report. Both the troop leader and the platoon commander acknowledge the report as does the combat team commander.

(2) The troop leader positions his tank to cover the roadblock and provide all-round protection. The APCs seek cover. The platoon commander moves his APC up to a position of observation, ideally in close proximity to the troop leader, so they can plan their activity, leaving the net free for contact reports and information from the lead tank.

(3) The troop leader and platoon commander reconnoitre the obstacle. It may be possible to carry this out from their vehicles, or the platoon commander may have to dismount.

(4) The troop leader or platoon commander makes his plan, and designating the fire support tasks, gives his radio orders. The platoon commander calls forward the necessary troops to the dismount area. Sections report as they dismount, and empty APCs return to the rear.

(5) The platoon commander then moves forward to clear the roadblock of mines or enemy covering it. He determines whether it can be by-passed, or if it must be removed. The situation is reported back to the combat team commander. It may be necessary for the troop leader to dismount to check any by-pass which has been found, or to help find one which will permit tank movement.

c. **Minefield:**

(1) The lead tank, upon encountering a minefield, reports "Contact minefield". If he is undamaged, he gets into a fire position. He sends back a SITREP. The troop leader and

platoon commander acknowledge the contact as does the combat team commander.

(2)   The troop leader positions his tanks to cover the minefield and protect the troop/platoon from all sides. The APCs seek cover and the platoon commander moves up to observe.

(3)   A reconnaissance of the minefield is ordered and speculative fire is used on suspected enemy covering positions.

(4)   Dismounted infantry then clear a lane through the minefield if it cannot be bypassed.

(5)   The platoon guides the tanks and APCs through the minefield, and the advance is resumed.

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SECTION 6

FIRE

FIRE POSITIONS

1.   The selection of fire positions is not restricted to defence. During the advance and the attack, section and platoon commanders must continually look for fire positions to adopt should they come under effective enemy fire. The selection of fire positions calls for both the knowledge of the characteristics of weapons and the use of ground.

2.   Commanders must endeavour to site weapons to engage the enemy at the best possible ranges to inflict maximum casualties on him. The following characteristics of section and platoon weapons should be considered:

    a.   range,

    b.   weight and rate of fire,

    c.   trajectory, and

    d.   the slope of the ground.

FIRE DISCIPLINE

3.   **General**. Soldiers must be trained to control their fire so as to provide effective and discriminate fire. All single shots must be aimed, and automatic weapon fire must be strictly controlled. The commander must first direct a heavy volume of aimed fire upon the enemy to win the fire-fight, then a slower rate of fire to keep the enemy neutralized.

4.   **Opening Fire Policy**. The platoon commander must establish the opening fire policy and ensure that it is understood by all ranks. While not denying the right to self-defence, the opening fire policy

ensures that ammunition is not wasted, that operations and positions are not compromised and that fire is applied at the right time and place.

5.   During the advance and attack, troops will usually open fire upon contact with an enemy who is in range of friendly weapons.

6.   During defensive or delaying operations and during an ambush, fire will be opened when the enemy reaches a pre-designated position in the killing zone (KZ). This point may be different for each type of weapon.

7.   **Fire Control.** The key to effective fire discipline is proper fire control orders. The section commander must give fire control orders to effectively control his section's fire. To obtain the best effect, he must know:

    a.   how to locate and indicate targets;

    b.   how to estimate ranges;

    c.   the characteristics and capabilities of his weapons against different targets at different ranges; and

    d.   how to give a proper fire order.

8.   **Ammunition Control.** Although fire power is essential for winning the fire-fight and for killing the enemy, ammunition must not be expended faster than it can be replenished. The rate of fire must be carefully controlled by the section commander and the 21C to ensure that the section does not run out of ammunition part way through an attack or battle. They must be constantly vigilant of the rate of ammunition expenditure and they must not hesitate to change the rate of fire if necessary.

FIRE CONTROL ORDERS

9.   **General.** Fire control orders are given to direct attention to a target or target area and to bring effective fire to bear upon it. The

10. **Sequence.** Fire control orders can be remembered by using the mnemonic **GRIT:**

 a. **Group.** What individual(s), or part of the organization is to fire;

 b. **Range.** The range to the target which will give the observer an idea of how far away to look for the target;

 c. **Indication.** The target is located using one of the methods stated in Annex D;

 d. **Type of Fire:**

 (1) Slow (deliberate). This is ordered after the fire fight has been won and is used to prevent the enemy from returning aimed fire or from moving. The rate of fire is 5 rounds per minute (RPM) for the C7 and 50 RPM for the C9.

 (2) Rapid. This is ordered to win the fire-fight or when the enemy is assaulting. This type of fire must be carefully controlled to conserve ammunition. The rate of fire is 20 RPM for the C7 and 100 RPM for the C9.

 (3) Automatic. The command "BURSTS-RAPID-FIRE" is used to order this type of fire. It is only used in close quarter battle, particularly during the final stages of an ambush, when repelling a mass attack or in house clearing. Ammunition will govern the rate of fire on most occasions.

 (4) Snap shooting. This is intermittent, opportunity shooting at targets who might expose themselves for short periods. Usually only single or double tap shots are used. The command "WATCH AND SHOOT" is used to order this type of fire.

11. **Types of Fire Control Orders.** There are four types of fire control orders:

11.   **Types of Fire Control Orders.** There are four types of fire control orders:

a.   Full. Full fire control orders are given under ideal conditions, e. g..

THREE SECTION,

THREE HUNDRED,

HALF RIGHT RUINED HOUSE, LEFT END - ENEMY MACHINE-GUN,

SLOW RATE, FIRE

b.   **Brief.** Brief fire control orders are given when there is little time and the target is obvious e.g.:

ENEMY QUARTER LEFT,

RAPID FIRE

c.   **Delayed**. Delayed fire control orders are used when action by the enemy can be foreseen. The group chosen to engage the enemy gets ready to fire but the order to fire is held until the right moment e.g.:

EXAMPLE 1:   (Section commander gives delayed fire order in support of an assault by the remainder of the platoon).

TWO SECTION

TWO HUNDRED

FARM HOUSE - IMMEDIATELY BELOW - ENEMY IN HEDGEROW. ONE AND THREE SECTIONS ARE MOVING TO AN ASSAULT POSITION THROUGH THE WOODS ON OUR

RIGHT. WE WILL COVER THEIR ASSAULT WHEN THEY COME INTO THE OPEN.

AWAIT MY ORDER.

(When the platoon (-) is about to come into the open)

RAPID FIRE.

EXAMPLE 2: (Given by the section commander)

GROUP TWO

ONE HUNDRED

QUARTER RIGHT. SMALL WOOD. WHEN THE ENEMY COMES OUT THIS SIDE...

(when the enemy is in a suitable position)

RAPID FIRE.

d. **Individual**. Individual fire control orders allow individual firers to choose their own moment to open fire, e.g.:

RIFLEMAN NUMBER 1 AND RIFLEMAN NUMBER 2

TWO HUNDRED,

SLIGHTLY LEFT FARM BUILDINGS - ENEMY IN THE AREA,

WATCH AND SHOOT.

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HAND SIGNALS - DISMOUNTED

COMMANDERS TO ME	ARROWHEAD	DIAMOND	LOOSE FILE
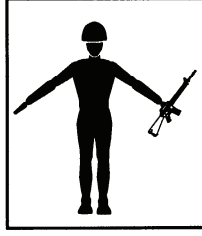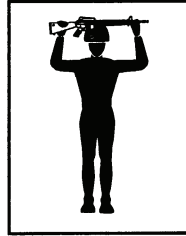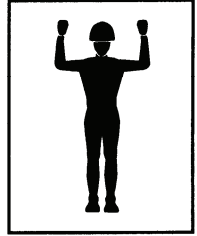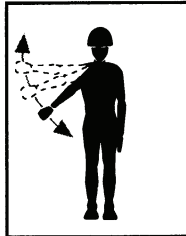
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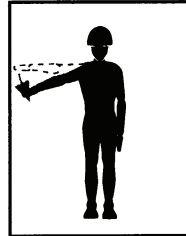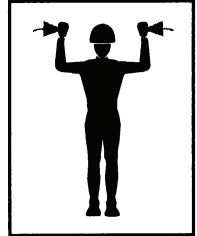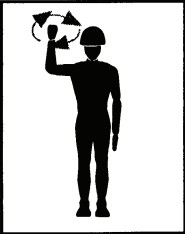
TURN ABOUT	ACKNOWLEDGE	SINGLE FILE	ADVANCE
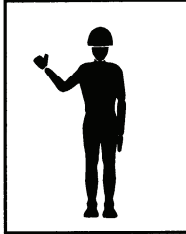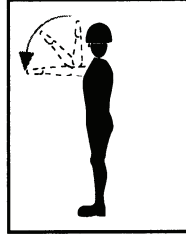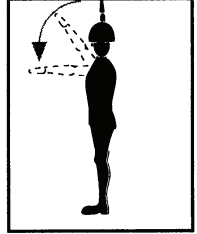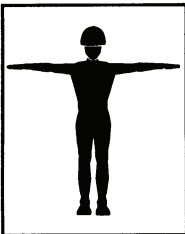
EXTENDED LINE	SPREAD OUT	ENEMY SIGHTED
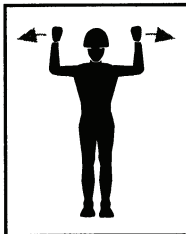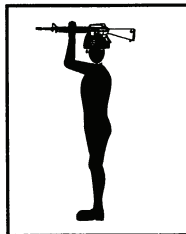
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HAND SIGNALS - MOUNTED

START UP	SWITCH OFF	ADVANCE	REVERSE	ACKNOWLEDGE

SPEED UP	SLOW DOWN	TURN ABOUT	ALL COMDS TO ME	HALT

DISMOUNT	MOUNT	SUB-UNITS COMDS TO ME	STAGGERED COLUMN	DO NOT CONFORM

LINE	CLOSE UP	ECHELON RIGHT	ECHELON LEFT	RALLY

OPEN OUT	ONE UP or LINE AHEAD (Point to lead)	TWO UP (Point to lead)	DIAMOND	TAKE UP TURRET DOWN POSITION

TAKE UP FIRE POSITION (Point to location)

4B-1
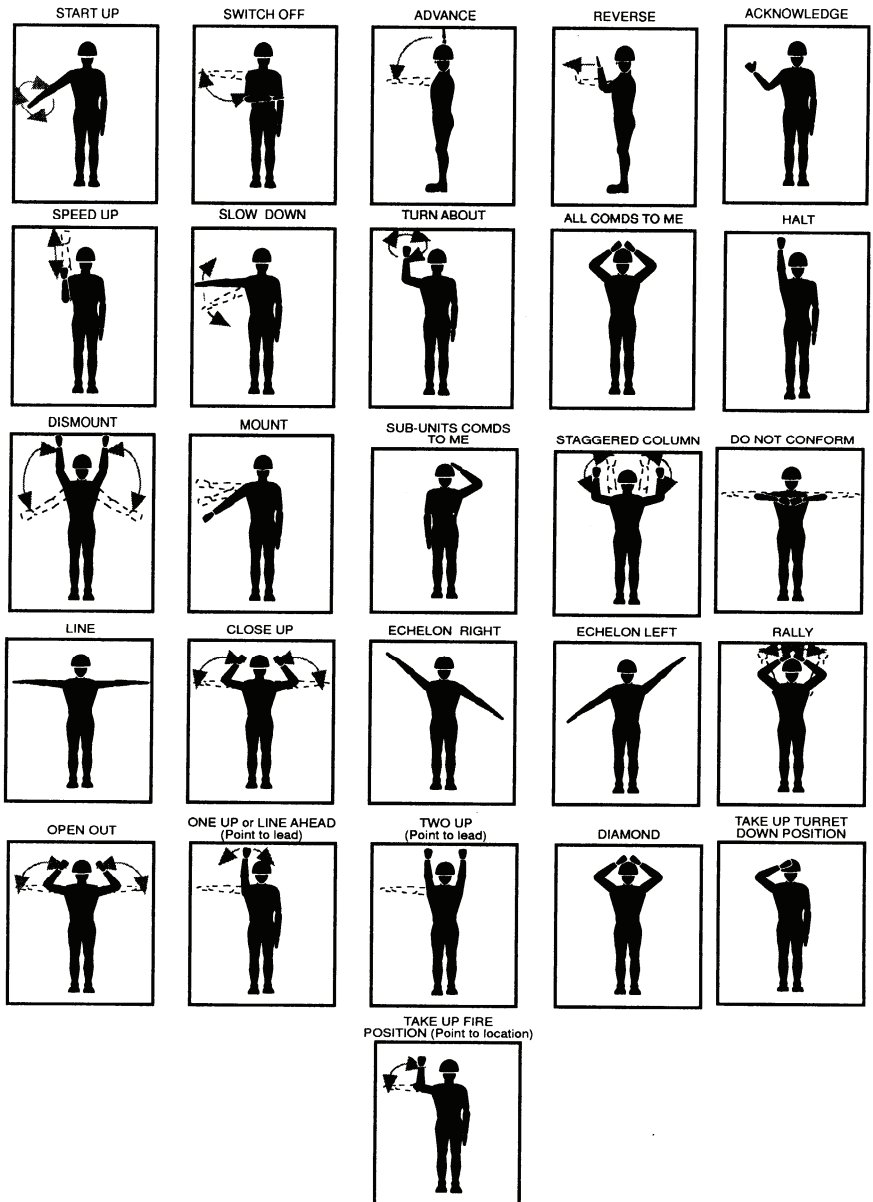
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NIGHT SIGNALS

START ENGINES

STOP or STOP ENGINES

LEFT

RIGHT

FORWARD, INCREASE SPEED

REVERSE (BLINK) '

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TARGET INDICATION

BASIC INDICATION

1.   Firing a tracer round is a simple and accurate method of indicating a target. A disadvantage of this method is that it may disclose your location.

ARCS OF FIRE

2.   It is easier to recognize a target if its surrounding area is known. An arc of fire is the sector of ground within which targets are engaged. It is defined by two imaginary lines from the weapon position through two easily identified points on the landscape, which will be used to indicate right and left limits. of the arc.

3.   **Detailing an Arc of Fire.** An example of this method using Figure 4D-1 is:

LOOK TO YOUR FRONT.

THREE-QUARTERS RIGHT, BEND IN ROAD, RIGHT EDGE, RIGHT OF ARC.

THREE-QUARTERS LEFT, TWO TALL TREES, LEFT TREE, LEFT OF ARC.

NEAR LIMIT, ROAD RUNNING ACROSS OUR FRONT.
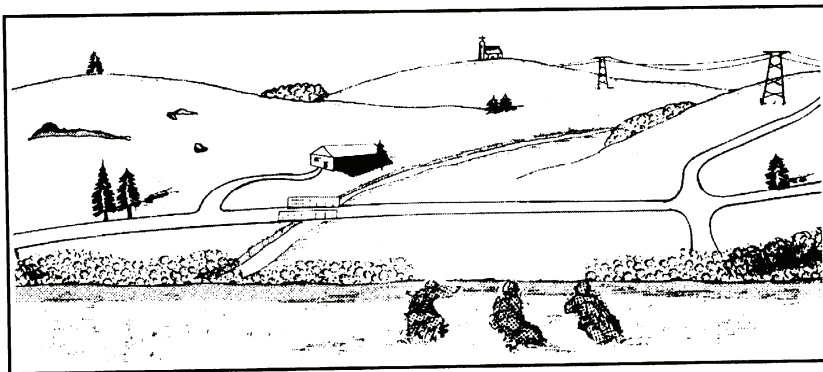
Figure 4D-1 Detailing Arcs of Fire

4.   **Direct Indication.** Obvious targets are indicated verbally by the direct method. The person indicating gives the range and where to look and describes the target. The terms to be used are:

    a.   CENTRE OF ARC, for targets on or very near the centre.

    b.   LEFT or RIGHT, for targets at right angles to the centre of arc.

    c.   SLIGHTLY, QUARTER, HALF, or THREE-QUARTERS, and LEFT or RIGHT, for targets between the centre of arc and left and right of arc.

5.   An example using Figure 4D-2 is: **TWO HUNDRED, HALF-LEFT, HOUSE.**
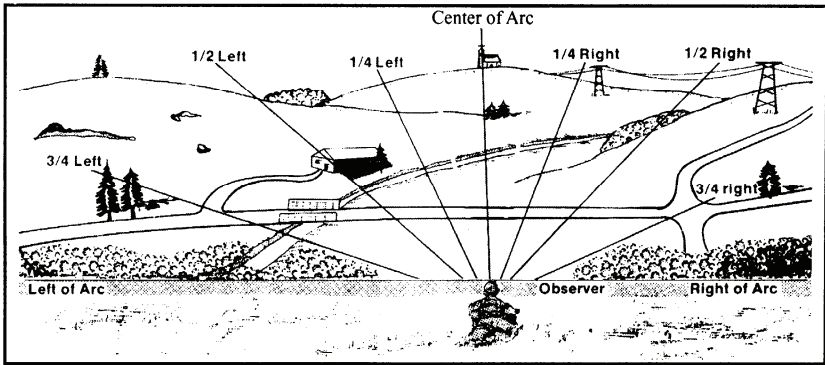
Figure 4D-2 Direct Indication

REFERENCE POINTS

6.   For targets that are difficult to identify, the direct method is used in conjunction with reference points and **ABOVE** and **BELOW.** Reference points should be prominent and unmistakable objects within the arc, and should be selected in areas where targets may be expected to appear. To avoid confusion, as few reference points as possible should be used.

7.   The direction of an indistinct target may be indicated by successive or auxiliary reference points.

8.   A reference point of an arc of fire may be used as an aiming point or target.

9.   Reference points are indicated as:

> **CENTRE OF ARC, CHURCH (KNOWN AS '"CHURCH"),
> QUARTER RIGHT, TOWER, CENTRE OF ARC, (KNOWN AS
> "FAR TOWER").**

10.   An example using Figure 4D-3 is: **CHURCH, QUARTER RIGHT, FAR TOWER** (the target).

11 . The range given is the range to the target.
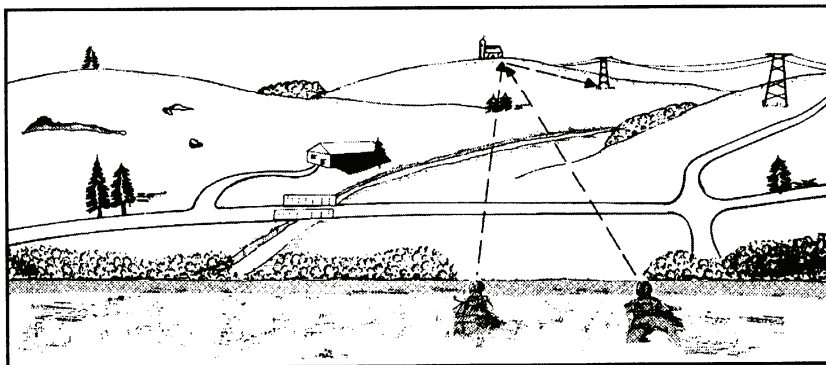
Figure 4D-3 Reference Points

CLOCK RAY

12.   For targets which are difficult to indicate, a reference point and a clock face may be used. An elevated reference point works best. Using this method, the observer imagines a clock face standing up on the landscape with its centre on a precise point of the reference object, see Figure 4D-4. The observer gives the range to the target, whether the target is right or left of the reference point and the appropriate hour on the clock face to indicate the direction of the target from the reference point.

600 - Top Of Pine - Left - Eight O'Clock - Tank
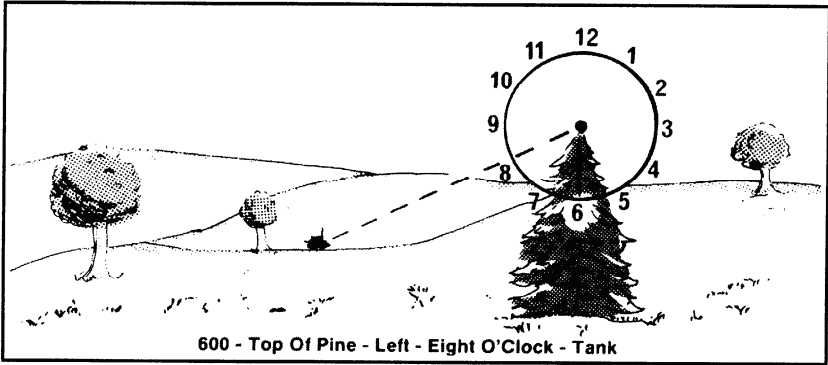
Figure 4D-4 Clock Ray

13.   An example using Figure 4D-5 is: THREE HUNDRED, CHURCH, RIGHT FOUR O'CLOCK, TANK.
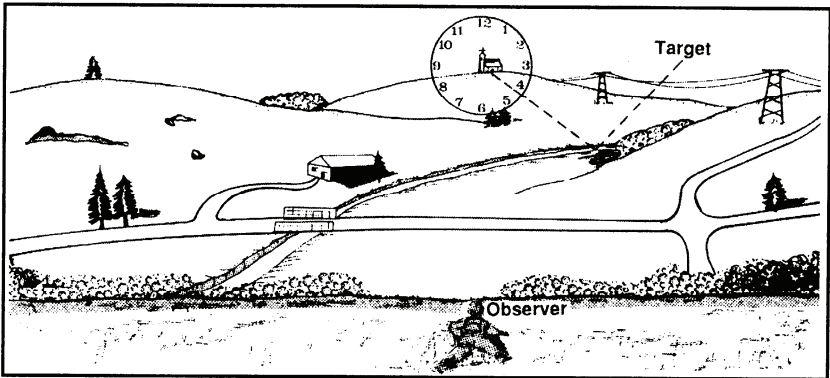
Figure 4D-5 Clock Ray Example

AUXILIARY REFERENCE POINTS

14.   Auxiliary reference points as close as possible to the target may be used for target indication. An example using Figure 4D-6 is:

TWO HUNDRED FIFTY, HOUSE, RIGHT 2 O'CLOCK, TWO TREES. (Auxiliary reference point is TREES). **RIGHT, FIVE MILS, TANK.**
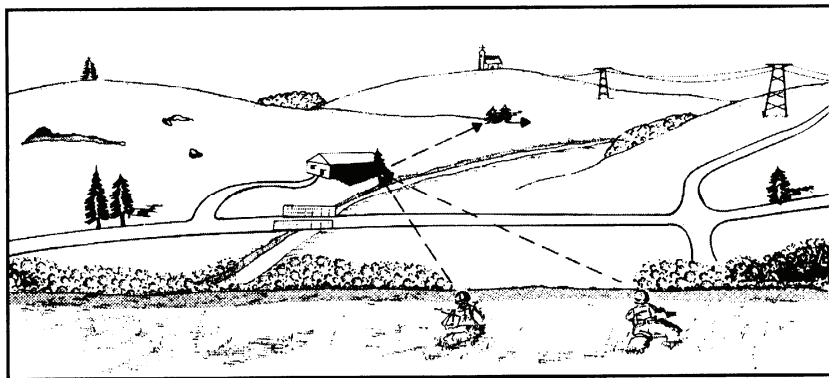
Figure 4D-6 Auxiliary Reference Points

15.   The lateral distance in mils from a reference point may be of assistance in indicating an indistinct target.

16.   **Successive Reference Points.** As a last resort a series of successive reference points may be used. This method may be confusing. An example using Figure 4D-7 is:

> **THREE HUNDRED, BRIDGE, RIGHT 2 O'CLOCK TWIN PINES, RIGHT 2 O'CLOCK FAR TOWER, 6 O'CLOCK, TANK.**

17.   The last target may be used as a reference point if it is near the new target.

18.   The range is always that to the target. For example, in a section position, the section commander will give the range to the target from the centre of the position.
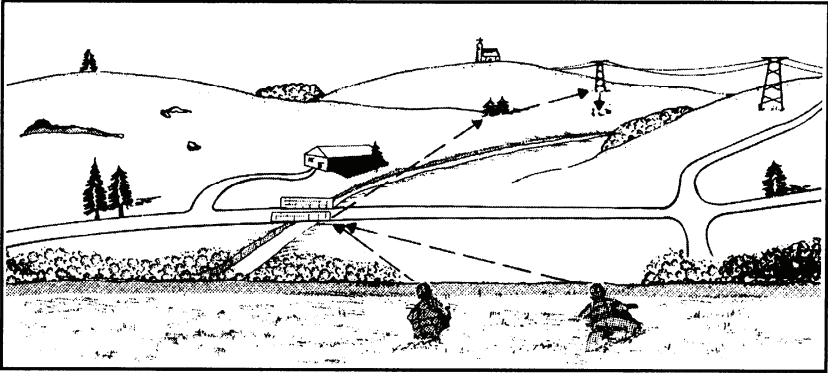
Figure 4D-7 Successive Reference Points

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CHAPTER 5

BATTLE TECHNIQUES

SECTION 1

REGROUPING

1 .   Regrouping is done to compensate for casualties incurred before or during an attack in order to maintain the operational capabilities of the section.

2.   The section commander must be prepared to regroup his section at any time to meet changing circumstances or to react to loss of personnel due to casualties. Section members must respond immediately to regrouping orders.

3.   If the vehicle is destroyed or must be abandoned, then the driver and gunner rejoin their section. The section commander can then form two, three men teams, a light antitank team or any other team that can assist in accomplishing the section mission.
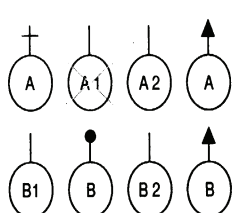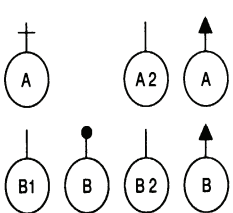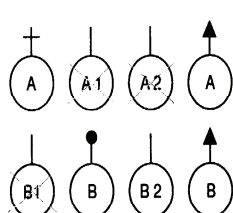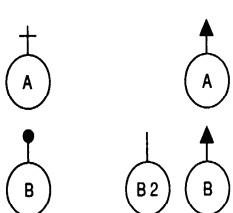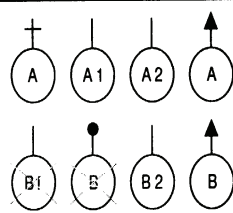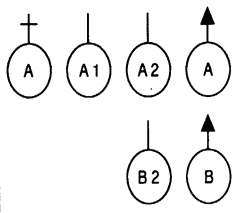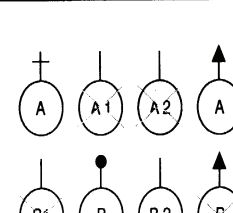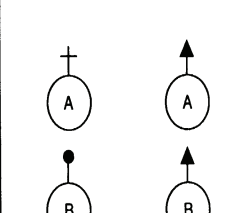
SITUATION	REMARKS	REGROUP
	1. Group with casualties ceases to exist. 2. Survivors join other group. 3. Section fights with 2 three man teams.	
	1. Teams with casualties ceases to exist. 2. Survivors join other team of their group. 3. Section fights with 2 three man teams.	
	1. Group with casualties ceases to exist. 2. Survivors join other group. 3. Section fights with 2 three man teams.	
	1. Survivors form single group. 2. Teams form based on number of survivors.	
More than five casualties	Survivors join closest flanking section.	

Figure 5-1-1 Battle Technique - Regrouping

SECTION 2

SECTION BATTLE DRILLS

GENERAL

1.   **Battle Drills.** Experience has shown that when rapid action is essential for success, it is an advantage to have methods of tackling minor tactical problems which are both known and understood. Section battle drills were developed to provide an instinctive reaction to enemy encounters. The seven drills explained in this section are designed to teach the soldiers learned reaction to combat stimuli during offensive operations at the section level. Each can be taught as a separate lesson. The sequential execution of the drills is a logical progression of action that enables a section to overcome minor opposition using fire and movement.

2.   While battle drills are to be learned and understood as drills during basic training, they must be applied sensibly on the battlefield. They are not to be followed blindly, without regard to the tactical situation.

3.   During their tactical estimate, section commanders must determine how to apply the drills to each problem.

4.   The seven section battle drills are:

    a. Battle Drill One - Preparation for battle,

    b. Battle Drill Two - Reaction to effective enemy fire,

    c. Battle Drill Three - Locating the enemy,

    d. Battle Drill Four - Winning the fire fight,

    e. Battle Drill Five - The Approach,

    f. Battle Drill Six - The Assault, and

g.   Battle Drill Seven - Consolidation.

BATTLE DRILL ONE - PREPARATION FOR BATTLE

5.   **Aim.** To ensure that every member of the section is properly prepared for battle.

6.   **Execution**. This drill will normally be carried out in a secure area such as a mounting base, concentration area or assembly area. The section commander will assemble his section and passes on the warning order, operation orders, or any changes to the section organization. He will detail fire team leaders as required. He will supervise the preparations for battle.
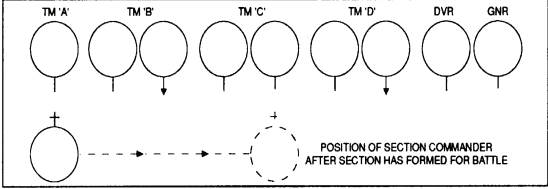
ORDER	GIVEN BY	ACTION
FALL IN FOR BATTLE	SECTION COMMANDER	1. Troops fall-in at the double, weapons at the port. 2. Section dresses with number one rifleman three paces in front of and facing the section commander.

TM 'A'   TM 'B'   TM 'C'   TM 'D'   DVR   GNR

POSITION OF SECTION COMMANDER
AFTER SECTION HAS FORMED FOR BATTLE

ORDER	GIVEN BY	ACTION
AS FOR BATTLE NUMBER	SECTION COMMANDER	1. Section numbers-off from the right: - number one rifleman, group one. - number two rifleman, group one. - number one LMG gunner, group one. - number three rifleman, group two. - number four rifleman, group two. - section 21C, group two leader. - number two LMG gunner, group two. -driver, -gunner.
WARNING ORDER	SECTION COMMANDER	Warning order to include A. Task outline (coy / pl / sect); B. Time / location for orders; C. No move before time; D. Specific administration / stores / munition / weapons; and E. Service support considerations.
PREPARE FOR BATTLE	SECTION COMMANDER	1. Darken exposed skin. 2. Apply foliage / scrim to break up outline of helmet and equipment. 3. Set weapon sights. Check sight screws. Blacken front sights or confirm scope zero. 4. Check ammunition and load magazines. Keep some tracers available for immediate use. 5. Prepare grenades. 6. Secure equipment. Check for fit, rattles and seviceability.
FALL-IN FOR INSPECTION	SECTION COMMANDER	1. Troops fall-in an open "V" grouping directed by the section commander. 2. Troops move at the double, weapons at the port. Order arms and stand at ease on command of section commander. Section commander inspects the section. 3. Section commander moves to centre and issues orders. 4. Rehersal. 5. Test fire weapons, if authorized.
SECTION ORDERS	SECTION COMMANDER	Issues or confirms section orders and confirms that individuals understand their tasks.
REHEARSAL	SECTION COMMANDER	As required.
TEST FIRE	SECTION COMMANDER	Not to be completed unless authorized by platoon commander. Weapons to be tested as follows: A. C7 repetition - min 3 rounds, automatic min 2 x 3 rounds. B. C9 min 2 x 3 rounds burst.
IMPORTANT CONSIDERATIONS		
a. It may be necessary to reorganize the section due to casualties or reinforcements. b. The section commander must identify who is in Group 1 and Group 2. c. Warning order must contain necessary information concerning special administrative requirements for the task.		

Figure 5-2-1 Battle Drill Number One - Preparation for Battle

BATTLE DRILL TWO - REACTION TO EFFECTIVE ENEMY FIRE

7. **Aim.** To ensure that all members of the section take immediate action against effective enemy fire.

8. **Execution**. Effective enemy fire in this situation is enemy small arms fire which would cause casualties if the section continued on its course.

9. Sections must continue the advance in spite of the noise of fire directed at someone else and regardless of stray rounds amongst them. Most soldiers instinctively drop to the ground when under fire. This action is generally wrong because the enemy usually opens fire when a target is in a place offering little or no cover. The best course is to react effectively, as taught in this battle drill.

10. This drill relies on team effort, reaction to anticipatory orders, clear target indication, passage of information, occupation of good fire positions, self discipline and aggressive determined behaviour. The following points should be noted:

    a. soldiers execute anticipatory orders automatically, on the double;

    b. if the enemy position is identified, soldiers immediately engage with aimed fire;

    c. if a soldier cannot see the enemy position, he should move to a location where he can;

    d. visual contact must be maintained within each team and group;

    e. soldiers must remain alert for orders; and .

    f. information must be passed quickly and accurately.

11.   Emphasize the following points to the riflemen/team members:

a.   If anticipatory orders have been given, execute as directed and at best possible speed.

b.   Use aimed shots.

c.   Maintain visual or voice contact with the team, group or section.

d.   Dash is to get out of the enemy's fire/sight - whether it is three paces or twelve is not important. What is important is to get to cover.

e.   Do not forget to change fire positions. The enemy may have you in his sights.

f.   Remain alert for section orders.

g.   Pass information quickly and accurately.

h.   Soldiers should always be either:

(1)   observing;

(2)   firing;

(3)   moving to a position of observation; or

(4)   moving to a position of fire.

i.   Do not bunch up or get too far apart. Try to stay approximately five metres apart.

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
TAKE COVER	Section Commander	1. **Double Tap**. Fire two rounds in direction of enemy to force him to react to your fire, disrupting his fire or make him take cover. 2. **Dash**. Get out of enemy's view or enemy's fire to a position of cover. 3**.** **Down**. Dive for cover. 4**:** **Crawl**. Move out of enemy fire and aiming point based on your down-point. Crawl to point of observation or fire. 5. **Observe**. Locate the enemy and friendly troops. 6. **Fire**. Adopt a fire position and change position if necessary. Return fire to win the fire fight and to indicate the enemy. 7. **Communicate**. Pass information on enemy strength and location to the rest of the section. Keep your team mate informed of your actions. 8. **Move**. On order to regroup or assault.

Figure 5-2-2   Battle Drill Number Two - Reaction to Effective Enemy Fire

BATTLE DRILL THREE - LOCATING THE ENEMY

12.   **Aim**. To locate and determine the size and composition of an enemy
position.

13.   **Execution**. This drill is carried out when the section has come into
contact with the enemy, but the exact enemy location or size is unknown. The
section commander orders, in turn, the actions detailed in Figure 5-2-3 until he has
the information that he needs.

14.   If the enemy still cannot be located, the section may have to move
forward or to a flank using fire and movement. Movement may be covered 'by
smoke if necessary. Since the enemy may simply be employing delaying tactics, it
is important that time not be wasted in this drill.

15.   Target indication drills are detailed in B-GL-318-001 /PT-001 Military
Training Volume 1 - Fieldcraft. The use of tracer is often a quick method of target
indication.

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
INDICATE Use clock ray or direct method.	Section Commander	Any section member who has located the enemy will return fire and give a target indication.
SPECULATIVE FIRE	Section Commander	Section commander designates one or two riflemen to engage likely areas with fire. Remainder of section observes.
CHANGE FIRE POSITIONS TO (...). PREPARE TO MOVE	Section Commander	Designated fire team plans move to draw enemy fire.
MOVE	Team Leader	Designated soldier moves short bound. Partner covers move. Remainder of section observes.

Figure 5-2-3 Battle Drill Number Three - Locating the Enemy

BATTLE DRILL FOUR - WINNING THE FIRE FIGHT

16.   **Aim**. Bring effective fire to bear on the enemy to neutralize him.

17.   **Execution**. Once the section commander has determined the enemy location and strength, he must inform his platoon commander of the situation. He must control the fire of the section so as to bring maximum effective fire onto the enemy position and thus win the fire

fight. Team members must adopt good fire positions automatically, ensuring that they are covered by their partners.

18.   If the section is operating as part of a platoon, the platoon commander will move forward, assess the situation and either take over or order the section commander to carry on and attack the enemy.

19.   If operating independently, the section commander, depending on his orders, must decide if he has sufficient combat power to destroy the enemy, or if he should dig in, bypass or withdraw. If the section commander decides, or is ordered to attack the enemy, he must proceed with his combat estimate.

20.   Additional fire support for the section's attack may be obtained from platoon resources, except possibly in the case of a hasty frontal attack. In this case the attack becomes a platoon attack even though the assault is made by the section, because the support is coordinated by the platoon commander.

21.   The section commander gives the fire control order to engage the enemy or to conduct searching fire. He retains the initiative by continuing to bring effective fire on the enemy while his section closes for the assault. An example of an order to win the fire fight follows.

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
TWO SECTION, 150 METRES, RED HOUSE - GO RIGHT FIFTY FALLEN TREE- SNIPER AT BASE, RAPID FIRE	Section Commander	The section must first win the fire fight. When the enemy is neutralized, the section commander may order one of the groups to maintain suppressive fire on the enemy while the other group observes arcs and prepares for possible assault or fire task.

Figure 5-2-4 Battle Drill Number Four - Winning the Fire Fight

22.   The four types of fire control orders are explained in chapter 4.

23.   During this time, the platoon commander will have moved up to assess the situation. He will either take over or order the section to attack, indicating what support he will provide. The section commander must never lose the initiative. He should take bold action to develop the situation.

24.   Concurrently with winning the fire fight, the section commander must make a combat estimate. Having won the fire fight, he must retain the initiative by continuing to bring fire down of the enemy while he plans his attack.

25.   The section commander should remember the following points:

    a.   Win the fire fight and continue to suppress the enemy.

    b.   The section is not alone. The platoon and company may be able to provide additional direct fire support. Indirect fire

support will seldom be available due to the close proximity of the section to the enemy, but it may be able to neutralize enemy supporting fire.

c. If there is a lull in the fight, the enemy will resume his fire and movement. This must be avoided.

d. To advance or attack before the fire fight is won is dangerous.

e. Control fire to neutralize the enemy but also to conserve ammunition for the assault and consolidation.

f. Team mates indicate when they change magazines so as to maintain suppressing fire upon the enemy.

g. Not all attacks are frontal. Look at the ground and make best use of it.

h. Keep your platoon commander informed of changing circumstances.

i. Use indirect fire if the situation justifies it.

j. Take advantage of your SRAAW and grenade launchers (when available).

BATTLE DRILL FIVE - APPROACH

26. **Aim**. To approach to within assault or grenade throwing range of the enemy while continuing to suppress him, using battle craft and available cover.

27. **Execution**.

a. Before the approach can begin, the fire fight must be won and the enemy neutralized. The section commander completes his combat estimate, gives his orders and starts the section

moving towards the assault position. His orders must be short and contain only the what must be known.

b. The section moves frontally or to a flank using fire and movement. This is a critical manoeuvre which can expose the section to flanking fire. The maintenance of momentum is important during the approach, and crucial during the transition from the approach phase to the assault phase.

c. During a platoon attack, the section commander must remain alert for unexpected enemy positions. The outside fire team must always watch the open flank. The section commander will have to designate a team or group to deal with any new enemy, while the rest of the section carries on to the original objective. Alternatively, he may have to take out one objective at a time. He must be careful not to overcommit the section.

28.   **Fire and Movement.** In his estimate the section commander decided whether he would attack frontally or from a flank. Whichever, the section commander must direct the section, group and finally team fire and movement at the right time in the battle. This changeover will normally occur as the section closes on the enemy location and external fire support becomes progressively less effective.

29.   The section must then take up the battle, providing its own fire support and conduct its approach with fire and movement. The various methods of fire and movement at section level are shown hereafter:

a. **Platoon fire and movement.** Section moves under cover of the platoon support (GPMG, another section).

b. **Section fire and movement.** Controlled by the section commander. No 1 Group covers No 2 Group, then no 2 Group covers No 1 Group.

c. **Group fire and movement.** Controlled by Group commander. One team covers the other.

d. Team fire and movement. On order by the section commander or section 21C, it is controlled within the team. One team-mate covers the other.

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
FIX BAYONETS	Section Commander	Section fixes bayonets if this has not already been done.
CHANGE MAGAZINES	Team Leaders	Individuals ensure that they have a charged magazine
ISSUE FRAGMENTARY ORDERS	Section Commander	Gives fragmentary orders using mnemonic **G.E.T.M** (group, enemy, task, move order to include who, where and when).
SECTION ADVANCE	Section Commander	Section advances using fire and movement.

Figure 5-2-5 Battle Drill Number Five - The Approach

30. The section commander must remember the following points:

a. The enemy must be neutralized during the approach.

b. Maintain the momentum throughout the approach.

c. Remain alert for the unexpected.

d. If the section does do not have or is losing fire support, it must use its own resources and use fire and movement.

e. Order Group or Team fire and movement only if necessary as it will slow the momentum and tire the troops for the final assault.

f. Make good use of the section SRAAW and grenade launcher if necessary/available.

g. Use indirect fire support if available.

h. Use smoke to cover exposed approaches. Ideally, the platoon mortar or section grenade launcher (when available) can lay smoke. Keep wind direction and wind speed in mind: they may cause the smoke to mask the section's own fire support.

i. Covering fire will be used for all movement in the open. The ideal angle of approach to the objective in relation to the line of support fire is 90 degrees. Sections must train with little or no angle of fire support as this may occur in case of a frontal assault.

j. Move at the double. Bounds are determined by the ground, available cover and enemy action.

k. Once movement is by teams, one team mate must cover the other as he moves to the next bound. The covering team-mate shouts "COVERING".

l. There may be casualties, therefore the section commander should practise section regrouping procedures before going into battle.

BATTLE DRILL SIX - THE ASSAULT

31. **Aim**. To destroy or capture the enemy.

32.   **Execution.**

a.   This drill commences when the section arrives at the assault position or to within grenade throwing range of the objective. The distance allows for the additional use of grenades as well as making the final dash to the enemy as short as possible.

b.   The section pauses only long enough for assault group objectives to be designated, a single trench often being the maximum size of a group objective.

c.   The momentum must be maintained. If the objectives can be designated on the move, it will not be necessary to pause and the section can carry right on into the assault. If additional orders must be given due to changes in the enemy situation (e.g., additional enemy locations, heavy incoming fire), fragmentary orders may be given, abbreviated as necessary.

d.   The drill is repeated as often as necessary as the section fights its way through the objective, or until the section is ordered to halt.

e.   Soldiers must remain alert for orders from the section or group commander.

f.   If an LMG gunner becomes a casualty, his partner, or another soldier should pick up his weapon.

g.   If a soldier loses his partner, he should automatically join up with an adjacent fire team.

33.   The section commander must remember the following points:

a.   He must reassert his control before ordering the assault, if such control was lost during the approach.

b.   It may be necessary to order a change of magazines if ammunition expenditure during the approach so warrants it.

c. At the section level, the objective is likely to be small, perhaps a single trench, a sniper or a pill box. In certain cases, a stalk by one man, with a grenade, may be the solution.

d. The SRAAW(L) can be very effective, used just before the assault goes in.

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
PREPARE TO ASSAULT!	Section Commander/ Group Commander	Section/Group await orders while continuing to fire at the enemy
SUPPORT GROUP ... ASSAULT GROUP ...	Section/ Group Commander	Section/Group Commander gives immediate orders using mnemonic **G.E.T.M** (Group, Enemy, Task, Move order)
GRENADIER (NAME) TRENCHMAN (NAME)	Assault Team Leader	Designated grenadier and trenchman acknowledge.
GRENADE	Grenadier	Grenadier throws grenade. All ensure protected from effect of explosion.

Figure 5-2-6 Battle Drill Number Six - The Assault (1 of 2)

ORDER	GIVEN BY	ACTION
On grenade detonation attack	Assault Team Leader	1. Assault group moves into enemy trench 2. Support groups fire into enemy trench and then lifts to depth targets as assault group moves through the trenches 3. Assault group uses fire and movement 4. Clean up the trench using fire and movement 5. Dispose of enemy weapons, guard the PWs until they can be escorted to the rear.

Figure 5-2-6 Battle Drill Number Six - The Assault (2 of 2)

BATTLE DRILL SEVEN - CONSOLIDATION

34.   **Aim**. To regroup the section, redistribute weapons and ammunition, and evacuate casualties and prisoners of war and prepare to defeat a possible enemy counter-attack.

35.   **Execution**. An immediate enemy counter-attack should be expected at this stage, especially if the objective is part of a defensive position. The counter-attack could be supported by AFVs, direct and indirect fire. Thus all activities must be executed with maximum speed.

36. The following points are important:

a. Any section group/team which was not part of the assault force must move up and rejoin the section as soon as the section commander calls them forward.

b. If the section commander cannot get around to the section immediately, each team must pass their ammunition and casualty states verbally. Teams report in order of numbering for battle as per battle drill number one. They state the number of magazines, grenades and SRAAW remaining. Teams with LMGs report the number of belts or drums. Teams report number of killed in action (KIA), wounded in action (WIA), missing in action (MIA), or "OK".

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
CONSOLIDATE	Section Commander	1. **Form a defence**. Immediately positions his section using existing cover including enemy trenches, so as to best defeat any enemy counter-attack. Preparations to meet a counter-attack may take place if threat is imminent and/or ordered by the platoon commander. Digging in may be necessary. 2. **Preparation of hasty defense.** Section commander will go around the section, confirming individual positions and allocating arcs of fire, particularly those of the section LMG and SRAAW. The platoon commander may arrive to confirm siting and pass on any further orders. 3. **Ammunition**. The section commander must verify individual ammunition holdings and insures that the redistribution of ammunition is carried out by the section 21C. Soldiers will recharge magazines from bandoliers.

Figure 5-2-7 Battle Drill Number Seven - Consolidation (1 of 2)

ORDER	GIVEN BY	ACTION
(a)	(b)	(c)
SEARCH OBJECTIVE	Section Commander	1. **Search**. If time, terrain and enemy activity permit, the section commander will order a team to conduct a search of the objective, or have the fire support group/team conduct the search as they rejoin the section. 2. **Liaison.** The section ommander must liaise with the right flanking section concerning arcs of fire and section location. 3**.** **Security**. Section must maintain vigilance to ensure early warning of enemy activity.

Figure 5-2-7 Battle Drill Number Seven - Consolidation (2 of 2)

SECTION 3

DISMOUNTED PLATOON OFFENSIVE BATTLE DRILLS

1.   **General**. The platoon is the smallest tactical entity. Platoon battle drills are used during the advance to contact and the attack and are less rigid than those at section level. The platoon commander is expected to conduct a more thorough tactical estimate than the section commander who generally acts within a platoon context. Flexibility and adaptability of drills to the situation become more important at the platoon level.

PLATOON BATTLE DRILL ONE - REACTION TO SECTION COMING UNDER EFFECTIVE ENEMY FIRE

2.   **Aim**. To prepare the platoon to either support the section under fire or to take over the attack.

3.   **Execution**. There are three stages to this drill, depending on the platoon commander's estimate of the situation. It begins when a section comes under effective fire.

4.   **Stage One - The platoon commander assesses the situation.**

   a.   The platoon commander moves forward to observe and evaluate the situation and sends a contact report to the company commander.

   b.   The platoon 21C moves the rest of the platoon as far forward as possible while keeping them out of the fire fight.

   c.   When the disengaged sections have taken cover, the platoon 21C will summon the section commanders in anticipation for orders. If the section commanders are already forward with the platoon commander, the platoon 21C controls the sections, paying particular attention to flank security.

d.   The platoon commander decides whether:

(1) the section in contact can handle the problem; or

(2) the section needs support in order to carry out its task; or

(3) if he should take over the operation.

e.   If the platoon commander decides that it is a section operation, he must order the section commander to attack and destroy the enemy, and inform him of what support he will give.

5.   **Stage Two - Section Attack.** If the platoon commander orders a section attack, he may elect to support it by:

a.   forming a fire base with the weapons detachment, thus freeing most or all of the engaged section to assault the objective;

b.   firing smoke to cover the move of the section; and/or

c.   requesting an indirect fire mission.

6.   **Stage Three - Platoon Attack.** The platoon commander may decide to take control if he considers that the position is too strong for a section. He gives orders to his travelling OGp (two rear section commanders, platoon 21C and runner from point section). Then he reports the situation to the company commander giving his outline plan and stating any request for support.

PLATOON BATTLE DRILL TWO - THE HASTY ATTACK

7.   **Aim.** To capture or destroy an enemy position.

8.   **Stage One - The Approach.**

a.   If the platoon is to move to a flank, the section on the flank chosen for the assault always leads to the assault position, followed by platoon HQ and then the remainder of the platoon.

b. If no task is given to the light mortar, it should go with platoon HQ on the flanking move.

c. If the fire base consists only of the weapons detachment, then the platoon 21C should take up the rear of the platoon, possibly with the mortar.

d. If the platoon comes under fire during the approach, the leading section commander automatically details an LMG fire team to drop off and neutralize the enemy. If the enemy fire is severe, the assaulting sections will have to halt while the light mortar screens off the line of advance.

e. If the platoon comes across a new enemy position blocking its approach, this will have to be dealt with before carrying on. Battle Drill One is repeated. The platoon commander must be careful not to over commit himself, or to fall into a trap.

f. In the assault position, the leading section automatically forms up on the open flank, the platoon commander in the middle, the second section on the inner flank, and the third section, if on the assault, takes up the depth position.

g. Sections complete battle drill five.

9. **Stage Two - The Assault.**

a. As soon as the platoon is formed pup in the assault position, the platoon commander ensures that everyone knows the enemy location by pointing out the axis of advance.

b. If section tasks have not been given during the order and the objective can be seen from the assault position, the platoon commander assigns objectives to his section commanders, who in turn will sub-divide their objectives to their groups. If the objective cannot be seen then this will have to be done on the move.

c.   On order, the platoon advances together until the leading sections make contact with the enemy. The platoon commander orders section fire and movement, and then lets his section commanders get on with assaulting their objectives (battle drill six).

d.   As the assault goes in, the fire base increases its rate of fire for as long as possible, and then switches across the position in front of the assaulting troops.

e.   As the sections fight through the objective, the platoon commander monitors their progress, ensuring that they do not become separated, or bogged down. If he has retained a reserve section, he will use it to assault positions missed by the forward sections, or to pass through or around them to assault a depth position and to maintain the momentum of the attack.

f.   When, as part of a company or combat team attack, the platoon assaults with two sections up, the reserve section stays one tactical bound behind the platoon commander - far enough back so as not to become committed, but close enough to intervene quickly when ordered. It should automatically mop up behind the forward sections, searching trenches and dugouts to ensure that they are clear, and taking over prisoners of war (PW) and the wounded from the assaulting troops. The section commander must remain constantly alert for orders from the platoon commander.

g.   The platoon 21C, if on the assault, takes up the rear. He will usually control the platoon weapons detachment if it is deployed, paying particular attention to guarding the platoon's open flank. He takes charge quickly of any PWs and wounded from the forward sections. He is prepared to take command if the platoon commander becomes a casualty.

10.   Variations. The platoon commander may consider variations for his attack. Some variations are:

a.   assaulting a part of the objective with one section, supported by the other and the fire base. Once secure, the first section supports the assault of the second section. This is useful when there are only two sections on the assault, and leaves the platoon commander with a reserve; and

b.   using the platoon Zulu vehicles and their weapons systems as a mobile fire support base under the platoon 2IC's command.
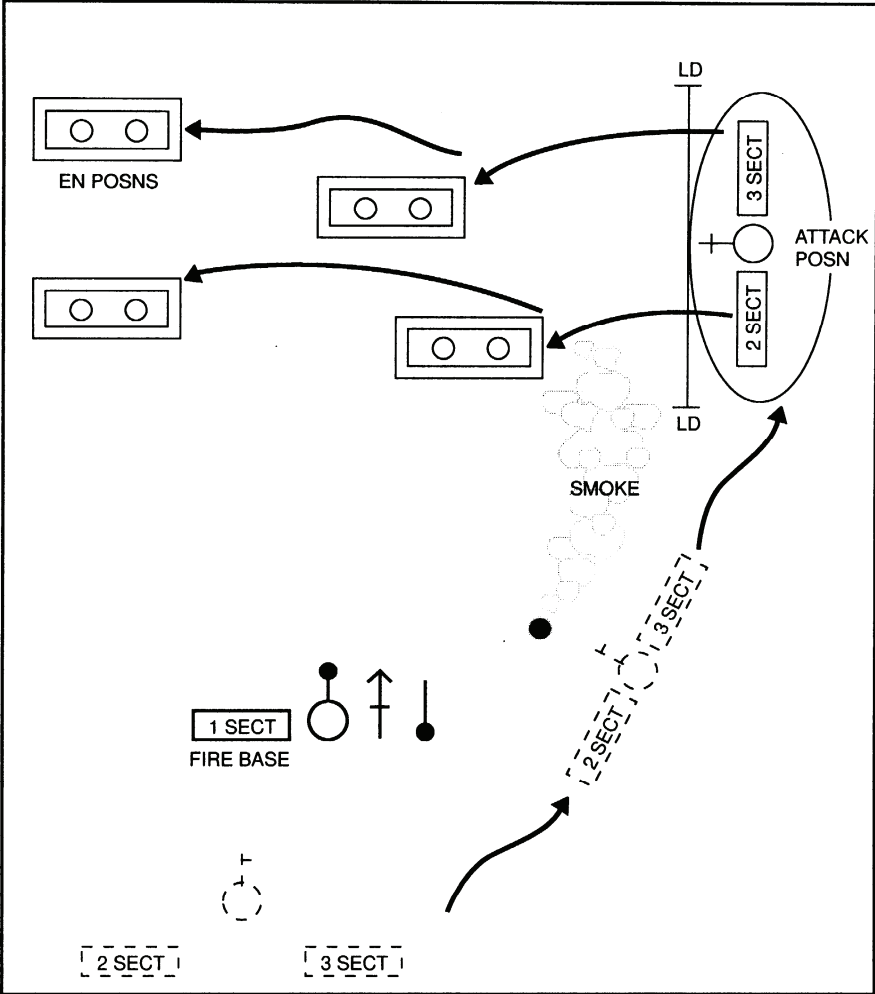
Figure 5-3-1 Example of a Platoon Assault From a Flank

PLATOON BATTLE DRILL THREE - CONSOLIDATION

11.   **Aim**. To prepare a hasty defensive position in anticipation of an enemy counter-attack, or to prepare for a new task.

12.   **Execution**. As soon as the objective has been captured, the platoon commander orders his sections to consolidate, normally facing along the original axis of advance.

a. Then he does the following:

(1)   signals for the fire base to rejoin the platoon, if it is not already doing so;

(2)   sets up his HQ in the centre of the position;

(3)   sends a short SITREP to the company commander. An example follows: "**POSITION CAPTURED CONSOLIDATING**";

(4)   confirms siting of sections to include arcs for the support weapons;

(5)   considers establishing an observation post to cover the most likely enemy counter-attack route; and

(6)   orders shell scrapes to be dug, or enemy positions to be improved, if the advance is not to continue immediately.

b.   The platoon 2ICs main job is administration, so that the platoon and section commanders are free to concentrate on the enemy. He carries out the following:

(1)   establishes the platoon PW and casualty collection point;

(2)   receives the section ammunition and casualty reports from the section 2ICs;

(3)   organizes a work party comprising of the section 2ICs and one man per section, which reports to him on consolidation. The work party's tasks may be:

    (a)   evacuate casualties to the company collection point; or await the arrival of the company ambulance;

    (b)   escort PWs to the company collection point;

    (c)   redistribute ammunition between sections; and

    (d)   search enemy dead;

(4)   advise the platoon commander of the ammunition and casualty state; and

(5)   pass the ammunition and casualty state to the company sergeant-major.

c. Section commanders:

(1)   carry out their own consolidation battle drill;

(2)   liaise with flanking sections on arcs; and

(3)   dispatch the section 21C and one soldier to the platoon 21C along with the ammunition and casualty state and any PWs and wounded.

SECTION 4

OTHER DRILLS

TRENCH CLEARING

1.   An enemy trench system is attacked as part of a deliberate attack at company/combat team or battalion/battle group level. Detailed planning and rehearsals are necessary.

2.   Battle drills are employed up to the point where the assaulting soldiers break into the enemy trench system. Once the platoon has broken-in, the platoon commander first ensures that he consolidates his position at the break-in point (Figure 5-4-1). This involves:

   a.   capturing enough of the trench system to allow room for the entire platoon to get below ground;

   b.   sections consolidate their portion of trench, prepare for counter-attack and wait for orders;

   c.   closing gaps between sections and confirming the entire trench has been seized; and

   d.   marking the entry point with light or flag for follow-on troops.

3.   Once the platoon commander determines that the position is secure, he starts clearing his portion of the objective as ordered. Even small trench systems will absorb a disproportionate number of soldiers. Platoons clear in one direction only. Laterals and junction points in the trench system must be guarded by a fire team, until that portion of trench is cleared. The platoon commander's orders must identify the following:

   a.   lead section,

b. second (follow-up) section, and

c. rear section.

4.   **Lead Section**. The lead section starts the clearance. The technique is illustrated in Figure 5-4-1. The lead section proceeds as follows:

a. uses the trench as protection from enemy indirect fire and friendly support fire;

b. clears the trench one direction at a time, see {1 }, figure 5-4-1;

c. secures all junctions to prevent access from uncleared .areas, see (2), figure 5-4-1;

d. maintains a suitable interval to prevent getting caught in friendly fire;

e. maintains communications within the section, this helps prevent disorientation;

f. never unnecessarily exposes personnel above the surface in the communication trench, (see (3), figure 5-4-1), as enemy snipers will be on the flanks waiting for targets. However, section commanders must be continuously alert for opportunities to outflank short portions of the trench system such as bends or where the surface of the ground lends itself to doing so;

g. seize dominating points of ground along the trench system to enable friendly machine gun fire to be directed into the enemy trenches ahead of the advancing assault troops should be immediately exploited. This will also help deny the use of such terrain to enemy snipers;

h.   carry extra grenades ready for instant use;

i. fragmentation grenades are preferable to smoke grenades when clearing trenches, as the latter mask friendly fire and may even assist the enemy. They should be thrown in the general direction of the advance, see {4}, figure 5-4-1;

j. forward movement of ammunition is essential;

k. be alert for enemy counter-attacks;

l. prisoners of war must be guarded and sent back as soon as possible;

m. extra caution is required at junctions. Friendly troops may appear from an unexpected direction; and

n. casualties must be evacuated rapidly.

5. **Command**. Strict control is essential. The section commander must be close to the lead team, (see M, figure 5-4-1), and, maintain control:

a. keep the platoon commander well informed of his progress (a runner may be useful for this purpose);

b. critical trench junctions are reinforced to keep communications open;

c. a visual system is used to mark the section's progress, to assist the rear commanders to monitor the advance of the lead elements;

d. whistle signals or improvised signs are very useful;

e. there must be a clear procedure to ensure effective change of the lead section. The section commander must receive clear orders on when to stop, go firm and signal for the follow-on sections to pass through.

6.   **Lead Team**. Decisive action by the lead team is essential. The team should proceed as follows:

a.   each bend must be cleared first with a grenade, (see {4}, figure 5-4-1). Immediately following the grenade explosion, the team moves forward, keeping low and firing;

b.   the lead soldier moves (crawls, if necessary) to the next bend, covered by his partner; and

c.   repeats the technique.

7.   **Second Section**. The second section advances behind the platoon commander. It's main job is to keep the trench clear, and to act as the link to the rear section. Its tasks are as follows:

a.   mark the extent of the cleared trench with flags or lights;

b.   pass PWs back to the rear section;

c.   provide initial first aid to wounded soldiers, and pass them back to the rear section;

d.   confirm that bunkers and dugouts cleared by the lead section are, in fact, clear;

e.   throw the bodies of the dead over the parapet, to ease congestion in the trench;

f.   pass forward ammunition and orders;

g.   guard laterals, until they can be taken over by the rear section or follow-on troops; and

h.   be prepared to take over the lead.

8.   **Rear Section**. The primary job of the rear section is to provide a firm base at the break-in point, until it is relieved by follow-on troops. This consists of:

a.   guarding the flanks and/or maintaining contact with flanking elements, as applicable;

b.   taking charge of prisoners of war and casualties from the forward sections and assist the platoon second in command in evacuating them to the company collection point;

c.   guarding of laterals from the second section;

d.   resupplying ammunition to the forward sections;

e.   providing fire support and observation as required; and

f.   ensuring that the entry point is well marked, and assist in the forward passage of follow-on troops.
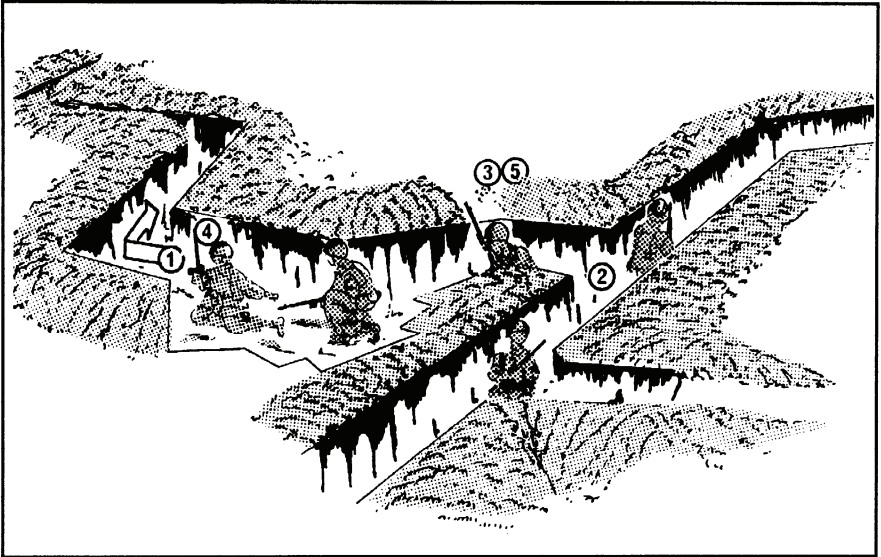
Figure 5-4-1 Trench Clearing Technique - Head Section

ATTACKING SMALL BUNKERS

9.   `Destroying or capturing small bunkers is a section task. Ideally, this is done by approaching from the rear along the communication trench, and attacking through the bunker entrance. When this is not possible, the following technique is employed (Figure 5-4-2):

   a.   fire (1) and smoke (2) should be used to blind and isolate the bunker;

   b.   a fire team or assault group approaches the bunker from a blind spot (3), covered by rifle and LMG fire aimed at the weapon slits (4);

   c.   SRAAW(L) fire is directed at the bunker just prior to the final assault (5);

d.   the assault team pushes a fragmentation grenade through the weapon slit before entering to clear the bunker; and

e.   the remainder of the section follows up to secure the position.
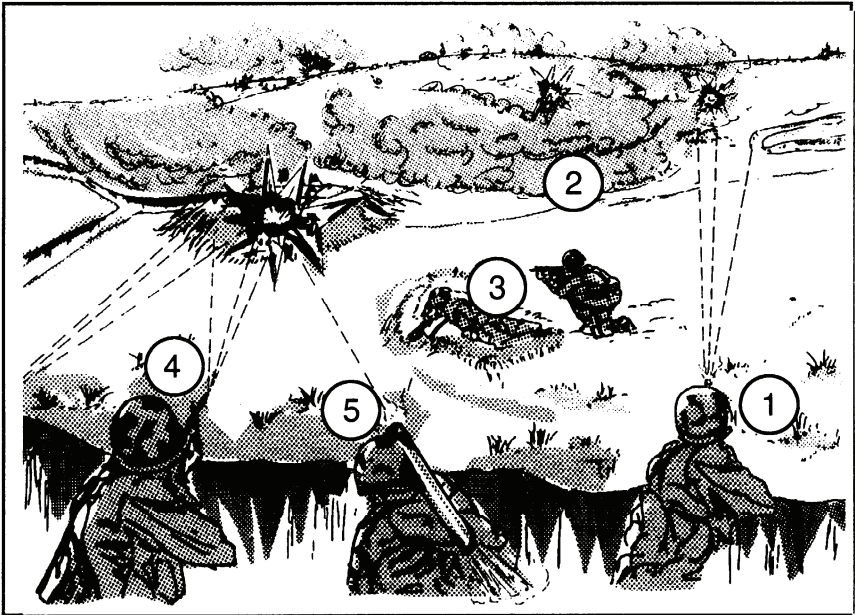
Figure 5-4-2 Attacking Small Bunkers

ATTACKING AFVS WITHIN THE OBJECTIVE

10.   Attacking AFVs in a strong point or trench system is a section task. Before the attack it must be isolated. The following technique may be employed (Figure 5-4-3):

a.   enemy infantry in support are neutralized (1);

b.   if a bunker is covering the AFV, it will be destroyed or smoked off (2);

c. small arms fire is directed at exposed AFV crew first, then at vision blocks and antennae bases;

d. the assault group must attempt to approach the AFV from its sides or rear (3);

e. SRAAW fire is directed at the AFV's vulnerable areas (4); and

f. the assault group must have a back-up antiarmour weapon (5).
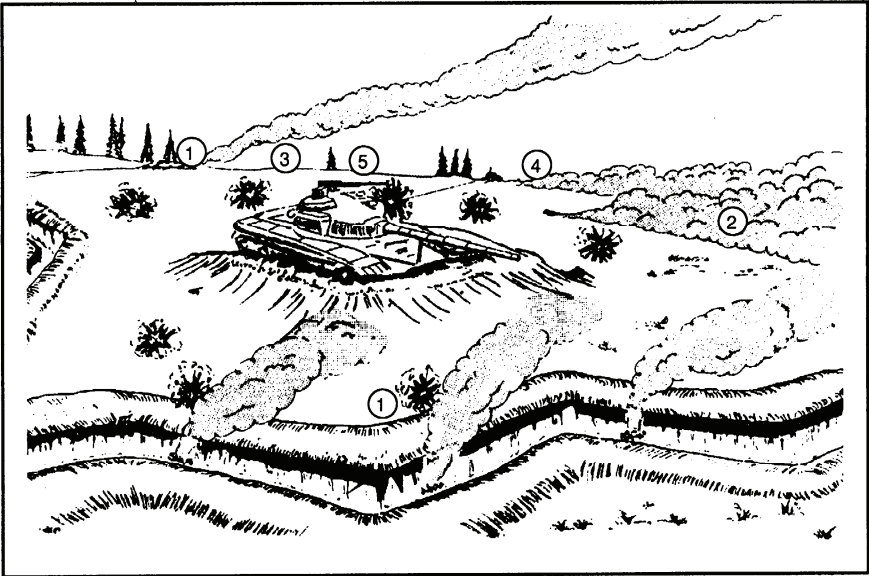
Figure 5-4-3 Attacking AFVs Within a Strong Point

SECTION 5

OBSTACLE CROSSING

GENERAL

1.   On the battlefield, the infantry platoon can expect to encounter a wide variety of artificial obstacles, both antipersonnel and antivehicle. Most obstacles will be observed and covered by fire. Techniques for dealing with antivehicle obstacles are found in B-GL-309-001/FT-001 Infantry Battalion In Battle and B-GL-301-002/FP-Z01 Combat Team Commander's Handbook, and are not covered in this chapter.

2.   The following are obstacles to infantry:

a.   antipersonnel minefields,

b.   wire, and

c.   water.

MINEFIELD BREACHING

3.   Minefields can be breached by either explosive, mechanical means or by hand. During the hasty attack, minefields are breached manually. Hand breaching can be deliberate or hasty. For a deliberate attack, mechanical or explosive means may be used by engineer or assault pioneers. In mechanized warfare, hand breaching is the last option to be considered.

4.   A section caught inadvertently in a minefield may have to breach it on its own. Otherwise breaching a minefield is at the very least a platoon task, but generally it requires a company or battalion. The task of breaching is directed by the assault pioneer personnel or the field engineers, although it may sometimes be necessary for the infantry to supply protection or manpower for manual breaching operations.

THE HASTY BREACH

5.　　The hasty breach means visually searching or feeling for mine detonators or surface laid mines. If a mine is suspected, the area is prodded with the bayonet to confirm if one is there. The bayonet prodding technique is illustrated in Figure 5-5-1.

6.　　The bayonet is pushed gently but firmly into the ground at an angle to the horizontal of about 30°. If the bayonet strikes a solid object, a mine must be suspected. On no account is the bayonet be jabbed into the ground as this might cause detonation.

7.　　When an antipersonnel mine is encountered, it is neutralized. When an antitank mine is discovered, it is marked with a piece of paper or minefield tape (or any convenient and visible marker), so that it can be avoided by follow-on troops. Destruction of mines is carried out later by assault pioneers or field engineers.

RIGHT   **WRONG**

NOTE: The bayonnet should be pushed gently but firmly into the ground at about a 30 degree angle. Anti-personnel mines usually protrude above the surface; anti-tank mines are usually completely buried.
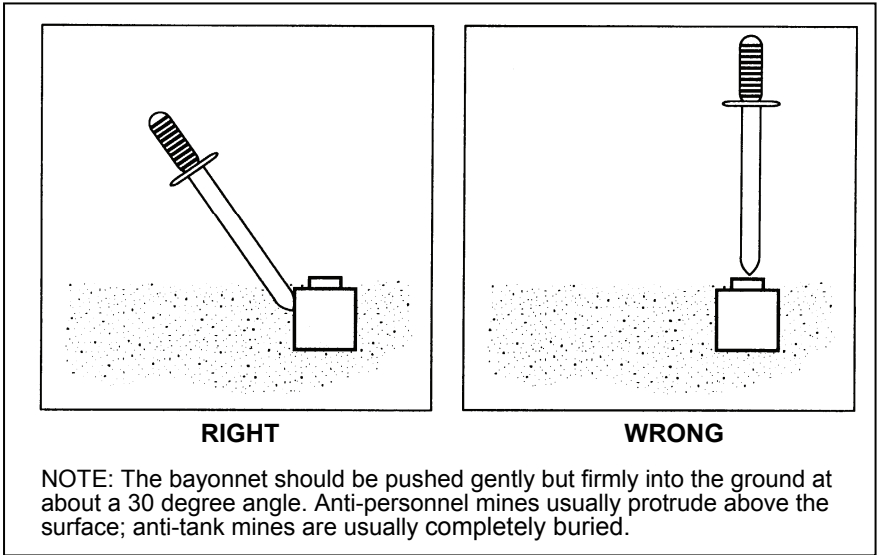
Figure 5-5-1 Bayonet Prodding

8.   When the lead section encounters a minefield, it informs the platoon commander immediately and adopts a temporary defensive posture. The platoon commander then moves forward to a position of observation and determines how to cross the obstacle. Depending on his orders, he may elect to go around or to cross the minefield. If he elects, or is ordered to cross the minefield, he considers the following:

    a.   a breaching party,

    b.   width of breach,

    c.   a fire base,

    d.   flank protection,

    e.   order of march and method (crawling, walking or running) for the remainder of the platoon to pass through the breach; and

f. hasty defensive positions on the far side.

9.　　　The section hasty breaching technique is detailed in Figure 5-5-2. A two person frontage is required for each metre of width of the breach. Normally a one metre width is sufficient for a personnel lane.

10.　　　Once the breaching section is through the minefield, it adopts a hasty defence on the far side to cover the crossing of the remainder. of the platoon. Platoon HQ, the remaining sections, the weapons detachment and the platoon second in command cross in single file, in the order detailed by the platoon commander.

11.　　　Once on the far side, each element automatically moves into its assigned defensive position. The platoon commander reports to the company commander the location and size of the breach (encoded) and how it is marked.
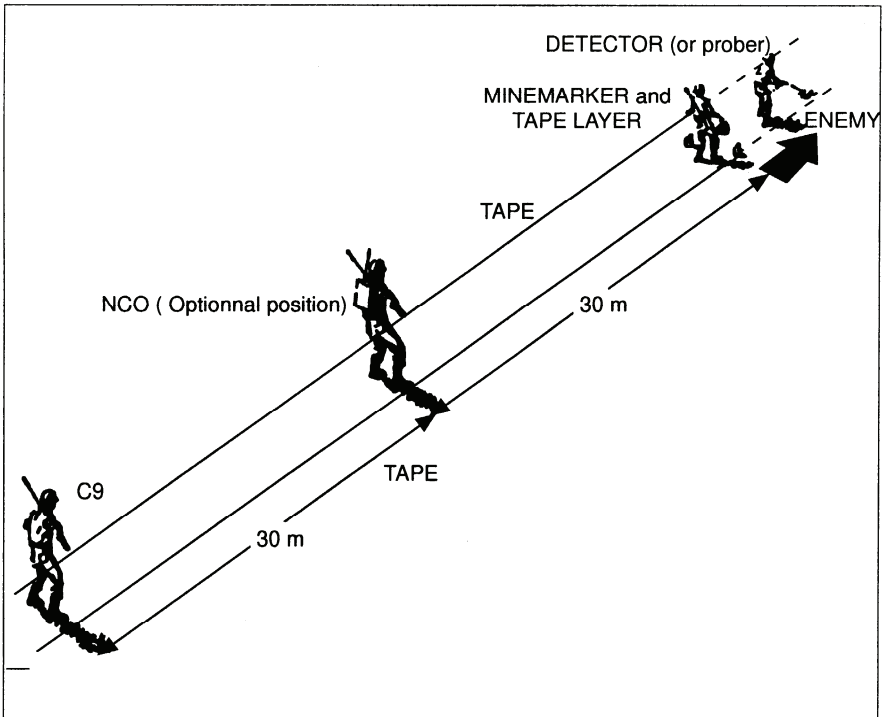
Figure 5-5-2 Section Hasty Minefield Breaching Technique

12.   If the breach is made under enemy fire or observation, the platoon commander must consider the use of smoke to cover the operation. The speed and method adopted by the follow-on troops to cross the obstacle (crawling, walking or running) will depend on the tactical situation.

13.   **Minefield Extraction Technique.** The hasty breaching technique may be used to extract a casualty from a minefield. Similarly, should a section unexpectedly find itself caught in a minefield, it can withdraw or carry on in the same manner.

14.   The following actions may be taken by section members should it inadvertently enter a minefield that is not covered by fire:

    a.   on detonation, everyone remains motionless and observant, ready to react to enemy fire;

    b.   information, including casualties if any, is passed verbally or by field signals;

    c.   prodding begins to and around the casualties;

    d.   all cleared lanes are marked;

    e.   first aid is given to the wounded, if possible; and

    f.   the casualties are extracted along the cleared lanes.

WIRE OBSTACLE BREACHING

15.   Wire can be breached by either explosive or hand methods. Explosive methods are carried out by assault pioneers and field engineers. Rifle sections hand breach wire obstacles. Wire breaching by the platoon is conducted similarly to minefield breaching.

16.   The section is divided into **BREACHING** and **SUPPORT;** the breaching group is designated as **CUTTING** and **CLEARING.** The cutting team cuts the wire with wire cutters, while the clearing team follows behind to clear the wire out of the lane. The section then proceeds as for minefield breaching.

17.   The need to mark the entry and exit points and the lane is not as critical for wire as it is for mines. The platoon commander details the marking requirements in his orders.

18.   For single strands of concertina, the section commander designates one or more soldiers to fall across the wire to act as a "bridge". The remainder of the section rush through, stepping on the soldier's back, between his shoulder blades. The last two soldiers

across, grab the ankles of the "bridge" soldier, lifting up and forward in somersault fashion.

WATER OBSTACLE CROSSING

19.   A platoon crosses a water obstacles using either improvised or deliberate techniques. Improvised crossing techniques include air mattress and jerry can rafts, brush rafts and groundsheet rafts. These techniques are described in B-GL-320-004/FT-001 Interim 1 Basic Field Engineering, and reproduced at annex A.

20.   Deliberate techniques include swimming APCs, rope bridges or assault boats. APC swimming and rope bridges are organized and controlled by assault pioneers and field engineers. Rifle sections and platoons are trained to cross water obstacles using assault boats.

21.   Assault boats will be assembled and inflated by assault pioneers, although riflemen may be required to assist. As a planning guide, one assault boat is required for each rifle section. Platoon HQ personnel can be divided between the section boats.

22.   In a noisy crossing (under cover of supporting fire), the boats are propelled by outboard motors operated by assault pioneers or field engineers. During a silent crossing, the section paddles the boat across the obstacle, under their section commander. Additional personnel are assigned to each boat to recover it for the next lift.

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PERSONNEL WATER CROSSING DEVICES

1.   If a soldier is unable to swim, he can cross a water obstacle by using a swimming aid. The simplest of these is a log or board which the soldier holds onto and paddles across. B-GL-320-004/FT-001 refers.

2.   **Trouser Float**. A simple flotation device can be made out of a pair of trousers. First both legs are knotted or tied off securely as close to the end of the legs as possible and the front zipped up, Next the trousers are thoroughly wetted and the legs filled with air. This is done by grasping the trousers by the waist band, holding them high over the head and slapping them down hard on to the surface of the water. If less noise is desired when the trousers are filled with air, they should be wet and held out front at arms length when the soldier jumps into water.

3.   The length of time the trouser float is effective is determined by the tightness of the trouser leg knot and the condition of the trousers themselves. The method used is shown in Figure 5A-1.

Figure 5A-1 Trouser Float

4.   **Jerrycan Rafts**. Empty jerrycans can be tied together to form any size of raft or water-wings. For water-wings, two cans should be

lashed together with a short piece of cordage and the swimmer lies between the two.

5.   A raft is constructed by lashing the cans to a light framework of saplings or bamboo. It may be used for personnel, or soldiers may put their equipment on it and push the raft across by swimming. The load capacity of the raft is estimated at 15 kgs per can. As an example, a six can raft has a load capacity of 90 kgs.

6.   The construction of a six can raft is shown in Figure 5A-3. The equipment required is:

    a.   6 jerrycans,

    b.   2-10 meters lashings, and

    c.   1 hand axe or machete.

The construction time for two persons is approximately 20 minutes.

7.   **Empty Boxes.** A single or two boxes lashed together to form water-wings will provide adequate floatation to transport personnel across a stream. The size and type of lumber as well as the condition of the boxes themselves will determine the amount of effective floatation they provide. Ammunition boxes are a very satisfactory expedient and as a rule are almost always available.

8.   **Brush Rafts.** Brush rafts can be constructed quickly, producing very effective 2 or 4 person rafts. The raft is constructed by laying out an LSVW tarpaulin. Brush is then gathered and tied into 50 cm diameter bundles and placed on the tarpaulin. The sides and the ends are then folded over the bundles and tied by cordage. The raft size should be 2 m x 1.75 m x 50 cm. This raft will hold two soldiers, plus their equipment and is paddled or pushed across the stream. The equipment required for the construction of the brush raft is:

    a. LSVW tarpaulin,

  b. hand axe or machete,

  c. paddle or long push pole,

  d. small lashings, and

  e. brush.

The construction time for two persons is approximately 15 minutes.

9.   A larger brush raft can be constructed by using an MLVW tarpaulin. It is constructed in the same manner to form a 3 m x 2.5 m x 0.6 m raft. The capacity of this raft is 1100 kgs.

10.   **Ground Sheet (or Poncho) Raft.** The ground sheet raft can be constructed very easily from the personal equipment of two soldiers and is capable of supporting 36 kgs.

11.   The ground sheet (or poncho) is laid out on the ground and the two weapons (or sticks if the weapons are to be left out) placed 50 cm apart on the poncho with the butts facing opposite directions. The packs or webbing are then placed between the weapons with the helmet and liner on the top of each. The remainder of the soldiers's equipment (boots, clothing, etc.) is placed between the packs. Next, the ground sheet is zipped up and the loose edge rolled in a tight roll until the ground sheet is wrapped tightly around the equipment. Then both ends of the ground sheet are twisted tightly and pulled over the bundle and tied with a boot lace. The second ground sheet is wrapped over the first in the same manner and tied with a boot lace. To make the raft more stable, two more boot laces are tied around the centre of the raft. Two non-swimmers can cross a stream by joining one hand over the raft and paddling with the other. The capacity of the raft can be increased by stuffing straw or grass between the two ground sheets.
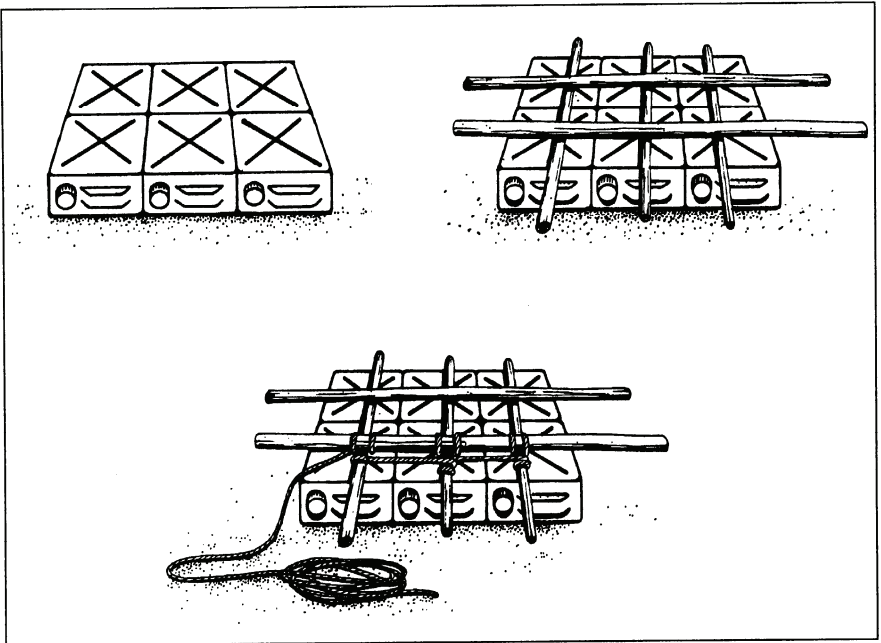
Figure 5A-2 Six Can Raft
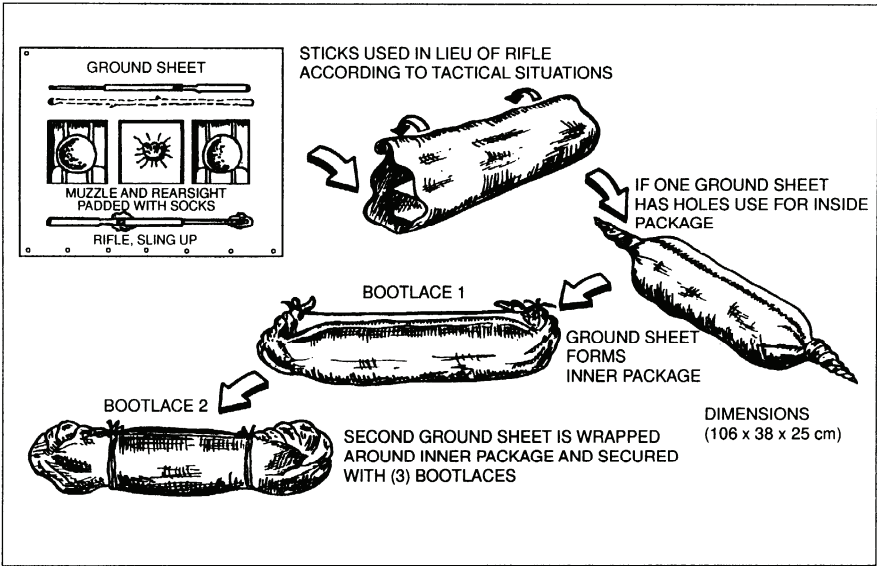
Figure 5A-3 Ground Sheet Raft

CHAPTER 6

OFFENSIVE OPERATIONS

SECTION 1

INTRODUCTION

GENERAL

1.   The aim of the offense is to defeat the enemy. It may be undertaken for any one of the following reasons:

   a.   to destroy, erode or repulse enemy forces;

   b.   to gain or recapture ground;

   c.   to acquire information;

   d.   to deprive the enemy of resources;

   e.   to fix an enemy in place and thus prevent him from reinforcing another force; and

   f.   to divert the enemy's attention from other areas of activity.

TYPES OF OFFENSIVE OPERATIONS

2.   The offense includes the attack and the pursuit.

   a.   **Attack.** The attack is conducted to defeat the enemy or to seize ground. Attacks are either hasty or deliberate. The circumstances dictate the type and commanders decide which is appropriate. The hasty attack is used frequently by the platoon and section during the advance to contact and the pursuit. The platoon participates in deliberate attacks conducted at the company level or higher.

(1) **Hasty attack.** Characterized by trading preparation time for speed. To maintain momentum or retain the initiative, minimum time is devoted to preparation. A hasty attack is normally launched from the axis of advance and relies primarily on SOPs and drills.

(2) **Deliberate Attack.** A deliberate attack is made against a strongly held or well-prepared position, or when a hasty attack has failed. It requires detailed battle procedure and may necessitate a regrouping and/or a redeployment of troops. In the deliberate attack, the platoon will normally participate as part of a larger force although an attack conducted by a platoon fighting patrol can be considered as a deliberate attack (raid). Infiltration is an effective tool in conducting a deliberate attack and is covered in this chapter.

b. **Pursuit**. The purpose of the pursuit is to maintain contact with the fleeing enemy forcing him to either stand and fight or continue fleeing.

SECTION 2

THE ATTACK

1. **Stages of the attack.** The attack comprises three stages: mounting, assault and the consolidation. Although these stages are sequential, they are not separate.

    a.   The **mounting stage** includes all preparations and actions which occur prior to H hour, especially reconnaissance.

    b.   The **assault stage** begins as the assault element crosses the line of departure. It includes:

        (1)   **Break-in.** Assault elements manoeuvre to the objective prepared to breach any known or encountered obstacles; and

        (2)   **Fighting through.** Infantry and their supporting elements clear the objective.

    c.   The **consolidation** stage involves the preparations to meet enemy counter-attacks or to undertake a new task.

2.   **Exploitation.** While not a stage of an attack, exploitation may be ordered following consolidation to take advantage of an enemy weakness or to maintain a running contact in accordance with a higher commander's concept. The platoon could participate as part of a combat team.

HASTY ATTACK

3.   Most attacks by the platoon and section are hasty attacks against improvised defenses. They are characterized by:

    a.   contact during advance;

    b.   overcoming the enemy between the line of departure and the objective and fighting through the objective; and

b.   overcoming the enemy between the line of departure and the objective and fighting through the objective; and

c.   exploiting beyond the objective.

4.   Battle procedure for the attack is given in Chapter 3. The main difference between the deliberate and hasty attack is that far less time is spent on recce and orders are most likely given while the platoon is moving. On call artillery and mortar fire support is used on all but small isolated enemy detachments. Fire and movement is used. The plan is simple and is quickly implemented. Platoon and section battle drills are used.

5.   Preparations for a hasty attack are limited to:

a.   collection of information by map and by observation,

b.   preliminary orders,

c.   recce,

d.   combat estimate, and

e.   simple plan.

6.   **Orders**. The platoon orders are given in a location that permits the 0 Gp to study the ground to the objective. The 0 Gp could be under artillery fire at this stage. Despite the haste, time must be given for the section commander's to brief their troops. Section commander's may describe the ground and objective as the section is moving forward, especially if the troops have not seen the objective.

7.   **Frontal Attack**. Obviously this is the most dangerous type of attack, but because of the ground and other factors if may be the only option. Troops move quickly under their supporting fire, and use fire and movement to cross open areas.

8.　　**Flanking Attack.** This may achieve surprise and thereby save casualties. However the enemy will be concentrating on obvious attack approaches so nothing may be taken for granted.

THE DELIBERATE ATTACK

9.　　At section and platoon level, most of the battle procedure and battle drills employed during a hasty attack are equally applicable during a deliberate attack. Following, are considerations to be given to stages of the deliberate attack. Due to the inherent difficulties caused by reduced visibility, additional considerations must be granted to deliberate attacks taking place at night.

10.　　**Mounting Stage.** The deliberate attack is characterized by detailedpreparation. This stage often includes:

    a.　detailed reconnaissances by commanders down to section level;

    b.　use of detailed models for orders and briefings;

    c.　all ranks briefings by company and platoon commanders;

    d.　rehearsals, including night rehearsals if applicable; and

    e.　deception measures.

11.　　**Assault Stage**.

    a.　**Approach**. Guides may be used to bring elements up to the attack position and the fire base, especially at night. Routes, attack positions and Line of Departure (LD) should be marked and secured ahead of time. Navigational aids such as machine guns firing on fixed lines along the flanks and artillery fire on the objective, may be used to help keep direction.

b. **Assault**. Many deliberate attacks take place at night. The platoon and section commanders must bear the following points in mind:

(1) Since control is more difficult at night, objectives should be limited to avoid soldiers and sections getting lost.

(2) Avoid passing one assault group through another to prevent confusion and casualties from friendly fire.

(3) Avoid converging on enemy weapon flashes when assaulting a position.

(4) Avoid the explosion of grenades above ground level.

(5) Every effort must be made to distinguish friend from foe before engaging.

12.   **Consolidation**. Actions on consolidation are covered in SOPs. Exceptions are covered in orders and during rehearsals. Standard consolidation drills can then be modified to fit the current situation.

13.   The coordination following a night attack can be difficult and administration may be hindered by reduced visibility. As much as possible, this must be anticipated during planning and dealt with in orders. For example, at first light the platoon area is searched carefully and the platoon adopts the daylight layout.

SECTION 3

RESERVE PLATOON IN A COMPANY ATTACK

1.　　　In a company attack, the commander may keep one rifle platoon as a reserve. He may commit it to reinforce a successful fight, to maintain the momentum, or to provide depth to the attack. The reserve may also be used to attack a flank or the rear of the enemy, or to by-pass or pass through the forward platoons to continue the advance.

2.　　　To prepare for the various options which may be presented, the reserve platoon commander must know the missions and plans of the assaulting platoons. He must be familiar with the ground and the enemy situation in the company area, and keep current with the tactical situation. Finally, his platoon must be capable of rapid and effective response when committed.

3.　　　Likely reserve tasks are:

a.　　protect the flanks or rear of the company;

b.　　maintain contact with adjacent units;

c.　　clear a position which has been overrun or bypassed by the assaulting platoons;

d.　　provide fire support for the assault platoons;

e.　　take over the mission of an assault platoon;

f.　　attack from a new direction;

g.　　protect or assist the consolidation and reorganization of the objective;

h.　　act as a cut off force; and

i. exploitation.

4.   The reserve platoon travels one tactical bound behind the forward platoons. The platoon commander and his signaller will move from position of observation to position of observation, so as to be able to read the battle. He must maintain contact (preferably visual) with the company commander, and must be immediately available for orders. The platoon moves from position of cover to position of cover, under control of the platoon 2IC.

SECTION 4

MECHANIZED OPERATIONS

1.   Mechanized operations are simply a faster means of delivering rifle companies onto an objective, while gaining additional protection, comms, firepower and shock effect. The fundamentals do not change, although there are additional planning considerations. Once disembarked, platoon and sections carry out their battle drills, but vary them to take advantage of the additional protection and firepower available from armoured personnel carriers (APC).

BATTLE PROCEDURE

2.   Preparation For Battle. The following additional measures are required when preparing for mechanized operations:

a.   Carry out vehicle maintenance and refuelling.

b.   Boresight and check APC mounted weapons, and stow additional ammunition.

c.   Check APC radios and installation kits and prepare man pack radios. Ensure that all are tuned to the correct frequency.

d.   Check equipment stowage and remove any flammable liquids from the crew compartment.

e.   Confirm seating plan for section and platoon HQ personnel and ensure that each soldier knows the dismount drill.

3.   Orders. Additional information required:

a.   formations to adopt,

b.   hides and harbours,

c.   dismount area, and

d.   ZULU APC tasks.

THE APPROACH

4.   Platoon formations and movement drills are detailed in Chapter Four. The platoon commander must be conversant with combat team movement as covered in B-GL-301-002/FP-Z01. Platoon and section commanders should keep the following mind:

a.   Maintain formations while making best use of ground.

b.   Keep well dispersed without diverging from the axis or loosing contact with the platoon/company commander.

c.   Assign arcs of observation for ground and air threats.

d.   Watch for hand signals from the platoon commander.

e.   If the radio net is a company controlled net, do not use the radios except in an emergency. Minimize at all times.

THE ATTACK

5.   **Attack Position.** Platoons move quickly into their assigned formations and positions.

6.   **Assault.** After crossing the line of departure (LD), APCs remain behind the tanks so as to benefit from their protection and avoid hindering the manoeuvre of tanks. APC gunners may engage targets of opportunity; especially by-passed enemy positions and enemy armed with hand-held antiarmour weapons.

7.   Section commanders listen to orders given to their platoon commanders, to help them anticipate tasks. The objective will be divided and platoon sectors assigned on the move.

8.   Section cbjectives will be assigned after the dismount. When a forward section vehicle is hit or disabled, the depth section commander may replace it in the formation with his own APC.

9.   **Dismount**. The dismount location and codeword for dismount are given in the combat team or company orders. The codeword is repeated over the radio by either the company or platoon commander: this will be designated in orders or SOPs, and will be dependent upon the ground and the tactical situation.

10.   On hearing the dismount codeword or simply "**Dismount-Dismount-Dismount**", APC drivers immediately close up behind the halted tanks, in line with each other, pointing in the direction of the enemy. APCs that are dispersed must close up to the platoon before dismounting. Sections dismount and go to ground to one or both sides of their APCs, being careful not to impede the vehicle's fire and movement, yet taking advantage of the protection which the APC offers.

11.   Having specified the movement direction prior to the dismount, the section commander regains the leadership of his section. Riflemen fix bayonets as they dismount.

12.   APC gunner's cover the dismount by firing between the tanks, concentrating on the closest enemy positions. Once the platoon is clear, zulu APCs move to their new tasks (intimate support, flank security, additional firebase or zulu harbour) usually under the command of the platoon 21C.

13.   **Fighting Through**. Once the platoon has dismounted, offensive battle drills are used. Section commanders control the section fire until the platoon commander orders the assault. Thereafter, battle drill six is executed.

14.   If the objective is a fully prepared trench system, it is important that each section gets into the enemy trench system as soon as possible for protection from enemy fire from mutually supporting positions.

15.	The platoon commander may detail initial section objectives on the approach or soon after the dismount, although these will often be quite obvious from the position and direction of the dismount. Section commanders may use the tank telephones to direct fire, using normal target indication.

16.	Reserve sections dismount with the rest of the platoon. The reserve platoon, on the other hand, will often remain mounted, in dead ground, under the control of the company 2IC.

SECTION 5

INFILTRATION

GENERAL

1.   Infiltration is a technique employed to pass troops undetected through the enemy's forward defences in order to:

    a.   seize undefended key terrain;

    b.   attack enemy depth positions, gun areas or counter-attack forces, and then withdraw;

    c.   seize and hold enemy depth battle positions; and

    d.   support other attacks.

2.   Infiltration is most frequently carried out by infantry on foot. It is conducted during reduced visibility or when the enemy's defences are widely dispersed.

3.   The insertion of troops behind the Forward Edge of Battle Area (FEBA) by helicopter is another form of infiltration.

4.   Infiltration by its nature may require the infiltrating force to act independently, from the main body; therefore, planning and intelligence are more detailed in the preparatory phase.

MOUNTING

5.   The assault element must be strong enough for its task but small enough to avoid detection.

6.   An assault force on foot will not carry many heavy weapons. To compensate for this:

    a.   all objectives must be in range of friendly indirect fire; and

b. plans must be made to reinforce the assault element with tanks and anti-armour weapons as soon as possible after the attack, if the force is to stay in location.

7. All routes must be secure from enemy observation and fire. Small parties using multiple routes are preferable to larger groups moving on only one or two routes.

8. Patrols should be tasked to screen the advance and cover the flanks of the infiltrating force. Behind this screen, guides may be deployed at critical points, RVs and attack positions. Simple control measures are vital to prevent confusion and clashes between infiltrating groups.

9. All possible passive and active measures should be taken to ensure surprise. In addition to any other deception plan, noise, light and artillery fire should be on call to distract or confuse the enemy if any infiltrating group is detected.

10. The force should be self-sufficient in ammunition, supplies and medical support until link-up can be achieved.

11. An infiltration has five phases:

a. **Patrol.** Find gaps, weak areas in the defense, and enemy positions.

b. **Prepare**. Conduct battle procedure. Tailor the soldier's load.

c. **Infiltrate**. Avoid contact whenever possible. Ignore ineffective enemy fire.

d. **Consolidate.** To be done in the enemy's rear or along a flank at a link-up point. Then move to an assembly area or objective rally point to continue the mission.

e. **Execute.** Actions on the objective: an attack, a raid, a seizure of key terrain or an area, the capture of prisoners, or the gathering of information. The attack is characterized by swift, violent action against the enemy to capitalize on surprise, boldness of action (doing the unexpected), and psychological effects (paralysis).

LANES AND ELEMENTS

12. The infiltration is organized with regard to lanes and elements.

13. **Single or multiple lanes.** An infiltration lane is a control measure that fixes fire planning responsibilities and coordinates forward and lateral movement of the infiltrating units. Companies assigned an infiltration lane pick their own routes within the lane and switch routes as necessary. Indirect fire into the lane must be coordinated with the unit that owns it.

14. Companies that leave their assigned lane run the risk of being hit by friendly fire. The company is usually assigned a single infiltration lane. The OC must decide whether to use a single lane or assign individual lanes to platoons and other elements.

a. Moving on a single lane requires less gaps or weaknesses in the enemy defense. It makes control and navigation easier but increases the chance of the entire company being detected.

b. Moving on multiple platoon lanes within the Coy boundaries requires more gaps in the enemy defense. It makes control and navigation more difficult, but there is less chance of the entire company being detected.

15. **Size and number of elements.** When the CO decides to use single or multiple lanes, he also considers the size and number of infiltrating elements he will use.

a. Smaller elements are less easily detected and can get through small gaps in the defense. In most cases, the detection of a

small element will not prevent the company from accomplishing its mission. Smaller elements require more time to complete the infiltration, need more link-ups, and are harder to control.

b. Larger elements are easier to control, require fewer link-ups, and take less time to infiltrate. They are more easily detected, require larger gaps, and once detected are more apt to endanger the company mission.

c. If the situation requires that the company move as a single unit, only one lane is needed. If the OC wishes to move in smaller elements, he can assign a lane to each element, assign a lane to each platoon and allow platoon leaders to control their lanes, or he can move the elements along a single lane at staggered intervals. The more individual elements travelling on a lane, the longer the movement will take, and the greater the risk that the lane will be discovered.

16.   If the infiltration takes place using multiple elements, contingency plans must cover the following possibilities:

a. a lead element makes contact, but the trail element(s) have not started infiltrating;

b. a lead element infiltrates successfully, but the trail element(s) is (are) compromised; and

c. a link-up point is compromised.

17.   Infiltrations are like patrols. The following is an example of a company infiltrating through enemy area using multiple lanes and elements:

a. When the company commander receives the mission to infiltrate, he sends out recce elements to find gaps and weaknesses in the enemy defense. If he has time, he confirms their findings with his own recce.

b. After identifying gaps or weaknesses, he assigns infiltration lanes to the platoons.

c. The platoon leader picks a route(s) within his lane. If possible, he does this during the patrol phase. This route(s) is the exact path the platoon will move on. It avoids the enemy and moves through areas that give cover and concealment.

d. The leader decides if the soldiers will infiltrate as a platoon, section, depending on the density and strength of the enemy.

e. The company moves to a platoon release point where platoons begin movement on routes through their lanes.

f. If an infiltration is conducted by small elements, link-up points may be necessary. Sections link up at a platoon link-up point, platoons at a company link-up point; then they move to an objective rally point (ORP) and conduct their operation.

g. If a link-up is not desirable, the company objective or zone may be broken up into sub-objectives or zones. Each infiltrating element then would move directly to their objective or zone to conduct operations.

18. An example of a company infiltrating as a sub-unit follows:

a. The OC receives a mission and based on his estimate, decides that the best way to get to the objective area is to infiltrate. However, there is not enough time to use multiple elements.

b. He picks several routes to the objective area. The routes are far enough apart that a company on one route cannot see the others, but close enough that the company could switch quickly from one to the other. Each route is covered an concealed, as well as obvious approaches, and avoids known enemy and civilian locations. The company will move on one route but can use the others if necessary.

c. The OC establishes an advance guard and assigns them their tasks. These tasks may include the following:

(1) recce and secure routes to the line of departure and the point of departure;

(2) recce, secure, or maintain surveillance on each of the tentative routes to the objective area;

(3) establish OPs at selected points;

(4) select and establish an ORP;

(5) conduct reconnaissance and maintain surveillance of the objective; and

(6) report enemy contact.

d. The advance guard begins movement and is followed by the main body. The distance between the advance guard and the main body will depend upon the terrain. The advance guard must be far enough ahead of the main body that the main body can either deploy or move to another route if the advance guard discovers the enemy. The advance guard must have enough time to move in a stealthy and secure manner. Enemy units should not be able to move undetected between the advance guard and the main body (Figure 6-5-1).
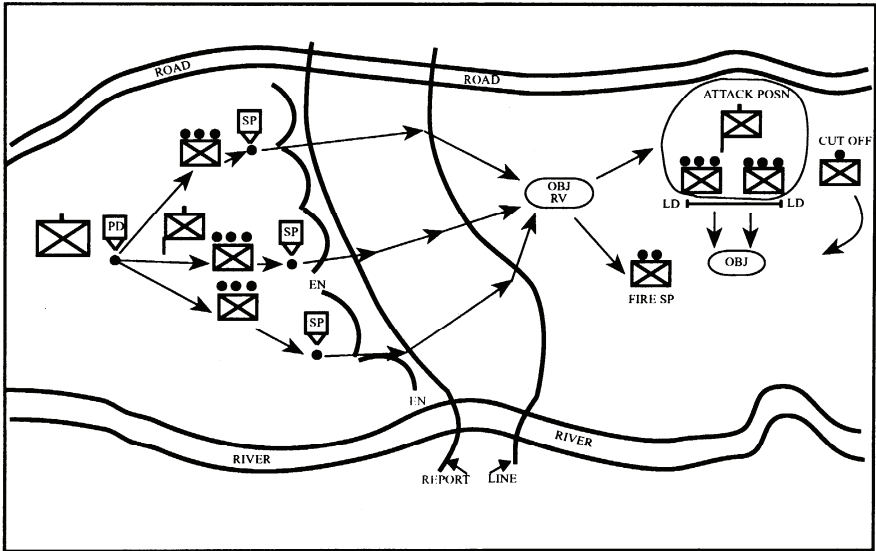
Figure 6-5-1 Company Infiltrating on multiple lanes

    e.   As the company moves, the advance guard sends reports back to the OC regarding the cover and concealment of each route, enemy activity, location of the ORP, activity on the objective, and other important information.

    f.   Enemy contact is avoided; however, if contact is made, it does not always mean the mission is compromised. Advance guard units making contact with the enemy disengage and report the size and location of the enemy to the main body. If the situation requires it, the main body moves to another route and continues the mission. If the main body makes contact unexpectedly, it either attacks or bypasses the enemy and resumes the mission.

19.   Infiltration techniques can also be used to cover short distances

around obstacles or enemy positions even if not planned. A battle may have already been initiated or the battlefield may be silent. The leader issues a Fragmentary Order (FRAGO) designating the link-up point and procedures, recognition signals, and the sequence execution. The platoons are released and they move out of the link-up points, conduct link-up, and continue the mission.

a. The link-up point(s) should be immediately recognizable during day or night. If possible, it should be visible from the company's start point.

b. Recognition signals and link-up procedures should be simple and quick. If there has been no firing or other noises, then the signals should not violate noise and light discipline. However, if there have already been assaults, artillery and small arms fire, signal, such as whistles and bugles, can be used as link-up aids. A lack of time and the short distance may make the linkup procedure unnecessary.

c. Suppressive fire against the enemy may be used to cover the infiltration.

SECTION s

LINK-UP OPERATIONS

1. Infiltration using multiple lanes will require the conduct of a linkup. A link-up operation is one where forces are to meet in enemy controlled territory. Its aim is to establish contact on the ground between forces which may have the same or differing missions.

2. It may occur between infiltrating forces during the consolidation, or it may happen between an infiltrated force and an attacking friendly force. A link-up mission will always be given in the context of a subsequent mission for the forces involved. It will normally state the location or the route where the link-up will take place and will frequently stipulate a time for link-up.

3. Link-up operations are generally offensive in nature. Speed in establishing the link-up is always a major consideration, to reduce the possibility of enemy reaction and to minimize the period of vulnerability. For the moving force, the operation may involve deliberate attacks or, if circumstances permit, the more rapid movement of an advance to contact deployment.

4. The platoon may participate in a link-up operation as part of the moving force. Section and platoon battle drills are applied aggressively to maintain the advance. During the last phase of the link-up operation, the point section and platoon must establish contact with the other force as early as possible and avoid the danger of exchanging fire with them. Well briefed, well trained troops are the key to success.

5. The following control measures are particularly important in link-up operations:

   a.   axis of advance or boundaries for the link-up;

   b.   objectives to be held and/or captured by each of the forces taking part;

c.   the locations where contact between the two forces will be established;

d.   the timings of the operation for the forces involved;

e.   liaison teams identified;

f.   passwords and visual identification signs;

g.   report lines and reference points; and

h.   contact frequencies, radio authentication procedures and codes.

SECTION 7

THE PURSUIT

1.   The pursuit is described as a series of rapid advances and hasty attacks to continue the dislocation of the enemy. The pursuit and the advance to contact are similar in so far as tactics and grouping are concerned. They differ fundamentally in the enemy situation.

2.   In the advance to contact the enemy's strength has not been tested. On the other hand, the pursuit follows the defeat of an enemy whose strength has been depleted and risks can be taken to hasten his final defeat. The battle group takes risks that it does not normally take when the enemy situation is uncertain.

3.   Large enemy positions may be bypassed, gaps exploited, and the battle group thrusts deeply into enemy territory without excessive concern for its own flanks and rear.

4.   Battle procedure is accelerated to maintain the pace. Sub-unit commanders receive verbal/radio **instructions** giving them greater freedom of action.

5.   At the section and platoon levels, this is translated into bold offensive action but it does not affect the manner in which the battle drills are executed.

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CHAPTER 7

DEFENCE

SECTION 1

GENERAL

AIM

1 .   Defensive operations are undertaken to stop the enemy advance or to defeat his attack. This is accomplished by fire, manoeuvre and choice of terrain to stop the enemy well forward and destroy him in selected areas (fight the enemy on ground of your choosing).

TYPES OF DEFENCES

2.   **Deliberate Defence.** This is conducted when time for planning and execution is available. It is possible when you are out of contact with the enemy or when contact is not imminent.

3.   **Hasty Defence.** This is conducted while you are in contact with the enemy or when contact is imminent. It relies heavily on improving the natural defensive character of the terrain.

FUNDAMENTALS

4.   The platoon commander must give special attention to the fundamentals of the defence when planning the defence. It will not always be possible to satisfy all the fundamentals, and the platoon commander will have to make compromises based on the company commander's intent and on his own estimate.

5.   **Use of Terrain.** Identify the likely enemy approaches and choose the best terrain from which to block them, consistent with their assigned tasks. Make judicious use of terrain to conceal the layout and your activities from the enemy.

6. Many tend to favour the occupation of high ground because it permits longer observation, but one must weigh the range of weapons against the danger of enemy direct fire from beyond their range.

7. Emphasize the control of terrain and not its occupation. At times itmay be more tactically sound to occupy a reverse slope.

8. **All-Around Defence.** Plan to defeat an attack from any direction. This may involve preparing alternate positions and assigning secondary arcs of fire to sections and fire teams to cover the flanks and rear of a platoon position.

9. **Mutual Support.** Site MGs, SRAAW and other support weapons and surveillance equipment to provide mutual support to each section as well as to flanking platoons and friendly troops deployed within the company's area of responsibility.

10. The layout must be such that if the enemy attacks any one trench, he comes under direct fire from one or more positions. Close coordination at all levels is essential, and to this end, liaison is carried out from:

   a. left to right,

   b. rear to front,

   c. higher to lower level of command,

   d. supporting to supported, and

   e. moving to static.

11. **Depth.** Depth is closely related to, but does not take precedence over, mutual support. Depth is essential to defeat a sustained attack and to absorb the enemy's momentum. Platoon commanders deploy their platoon in depth to ensure that a shallow penetration does not permit the enemy to overrun the position.

12.   In two section platoons, limited depth is gained in the siting of battle trenches. The weapons detachment and platoon HQ can provide some measure of depth to this end.

13.   **Manoeuvre.** At the platoon and section level, there will be little occasion for manoeuvre within the defensive position. Using AVGP/APCs to move troops to alternate positions may be an option.

14.   **Firepower.** The skilful deployment of weapons and good fire controlorders will contribute to an effective defense.

15.   Weapons are sited to take advantage of their range. The location of killing zones and the various weapon ranges decide the best range to open fire.

16.   Opening fire policy is given by the company commander based on the established rules of engagement for the theatre of operations. If the situation dictates the fire plan is coordinated and controlled by the company.

17.   **Reserves.** It is unlikely that platoons and sections will have a reserve in defensive operations.

18.   An example of a section defensive position is at Figure 7-1-1 .
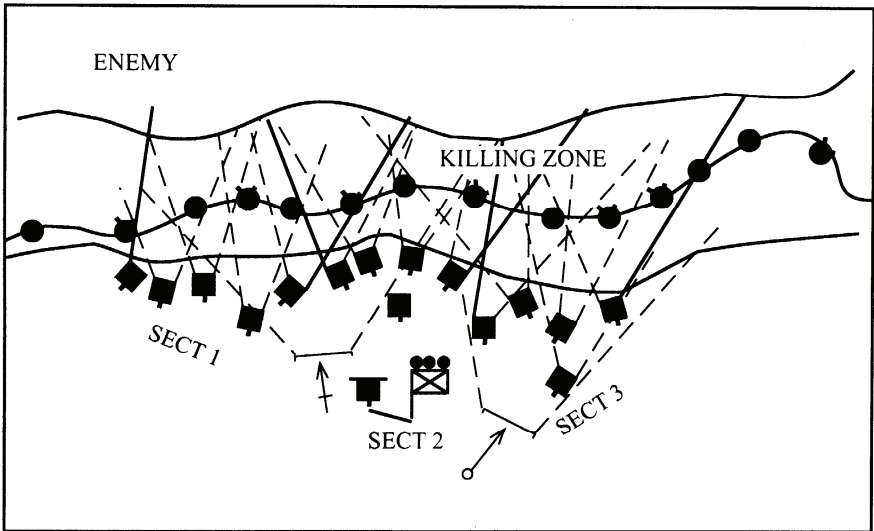
Figure 7-1-1 Example of three Sections in **Defensive**

REVERSE SLOPE

19.   A commander may choose a reverse slope position to achieve surprise and to reduce the effects of enemy long range observation and direct fire weapons. To conduct a successful reverse slope defense, the crest must be dominated by observation and fire.

20.   The reverse slope is in dead ground to the enemy. This may achieve surprise and denies the enemy fire support from his follow-up forces. An example of a reverse slope position is illustrated in Figure 7-1-2 .

21.   The forward slope, the crest and the reverse slope should be covered by indirect fire and by enfilade fire from flanking platoons or support weapons. Observation posts and standing patrols may be

positioned on the forward slope, especially at night, to prevent enemy infiltration. To' increase surprise, the commander may consider preparing dummy positions on the forward slope.

IDEAL POSITION

OP
(by day)

Line of fire

Hill

250-800 metres

Enemy
advance

OP
(by night)

Mines

Wire and mines

Defensive position

ACCEPTABLE POSITION

250-800 metres

Enemy
advance

OP by day
(defended by night)

Hull Down
Tanks

Mines

Defensive position

Wire and mines
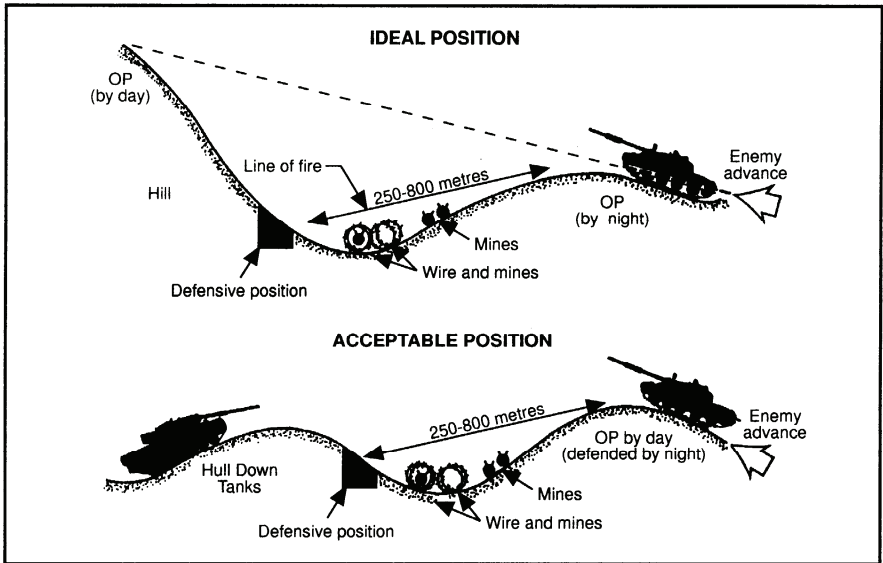
Figure 7-1-2 Reverse Slope Position

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SECTION 2

PLANNING THE DEFENCE

BATTLE PROCEDURE

1 .   The battle procedure for the defence is explained in Chapter 3. The aim is to have the troops on the ground and digging as soon as possible. The following considerations are important during the battle procedure:

  a. During the reconnaissance, the terrain is studied from different vantage points, especially from that of the enemy.

  b. Care is taken during the reconnaissance to ensure that the layout of the platoon defence is not inadvertently compromised. Stealth is essential. Protection is necessary and reconnaissance parties must carry a minimum of information and codes. Particular note is made of routes forward, and the track plan that is used during the occupation of the position is established before the arrival of the troops.

  c. The troops move forward under the command of the company, platoon and section seconds-in-command. The troops are prepared to fight during the move and immediately on arrival at the position.

  d. Correctly performed battle procedure allows the section commanders to give orders immediately to the troops on the arrival.

  e. Orders on protection, air and NBC defence, movement, camouflage and concealment must be immediately and strictly enforced.

  f. Commanders ensure that the complete defensive plan is understood by all ranks. By knowing that fire support is

available to break up an attack, the soldier's confidence is increased.

g.   During the occupation, the area is searched for enemy reconnaissance parties and observation posts. This is done even if the position is some distance from the Forward Edge to the Battle Area t FEBA) .

SITING THE POSITION

2.   **Company Level.** The company commander prepares the antiarmour plan, including LRAAW, MRAAW, SRAAW, tanks, tank destroyers, AVGP/APC weapons, artillery, air and air defense support. He plans the defence to engage the enemy in the killing zone(s). He sites the antiarmour weapons at maximum range to the flanks. LRAAW and MRAAW (if they are available) are sited in pairs and they receive alternate and secondary positions. He establishes the platoon positions and assign areas and arcs of responsibility. He indicates the general location of the section positions.

3.   **Platoon Level.** If not assigned by the company commander, the platoon commander sites each section and support weapon position, including his APCs. If there is time, he sites each trench and assign its arcs of fire. The platoon commander sites the platoon weapons and verifies the siting of the sections' weapons so that the arcs of fire converge on his assigned portion of the killing zone in order to support the company's mission and thereby respecting the Commander's intent. He sites the trenches by verifying the arcs of fire from ground level to ensure that the firer can see the target area.

4.   **Section Level.** The section commander carries out a detailed reconnaissance of his assigned area. With his eye at ground level he too confirms each weapon line of fire and determines the exact location and orientation of his fire trenches. He coordinates with flanking sections and support weapons to ensure that all enemy approaches are covered by observation and fire. Finally, he marks out his fire trenches on the ground by turning the ground over with a

shovel, or by using mine tape, wire or other suitable material to mark the forward edge of the trench. This is called "split-locking".

5.　　　　**Frontage**. Frontages are determined by the often conflicting requirements of assigned tasks, depth, mutual support, control and ground. A section can have four trenches ten metres apart. There will normally be approximately 150 - 200 metres between sections. A platoon in open country could typically occupy a frontage of up to 300 metres, and a depth of 100 metres.

6.　　　　**Fields of Fire**. Trenches must be sited with good fields of fire, normally not less than 100 metres, and ideally a little beyond the maximum effective range of the weapon (300 metres for the rifle, 600 metres for the LMG). In very close country, 50 metres may have to suffice. Details on the techniques of clearing fields of fire are found in 13-0L-318-001 /PT-001.

7.　　　　**Control**. Platoon HQ consists of at least two trenches, one for the platoon commander and his signaller, and one for the second in command and a member of the weapons detachment. The platoon commander's position must be sited so that he can see and command his sections effectively in battle. It is desirable that the platoon commander be able to see his entire position, the killing zone and the approaches to it. If this is not possible, an alternate command position may be necessary. Platoon HQ must be accessible, and it must be positioned to ensure good radio communications to company HQ.

8.　　　　The platoon second in command is responsible for the detailed layout and construction of the H Q once it has been sited by the platoon commander.

9.　　　　**Defensive Fire Tasks**. The company commander may choose artillery, mortar and/or machine gun defensive fire (DF) tasks within platoon areas of responsibility. Platoon commanders must be prepared to recommend targets. They must be prepared to call for the firing of DF targets in their area, and be required to execute DF tasks assigned to the platoon G PMG and APC weapons.

OCCUPATION

10.   **Initial Orders.** If the platoon commander can bring his O Gp with him onto the position, rye can issue a complete set of detailed orders before the arrival of the main body. If the Orders Group arrives with the main body the platoon commander issues initial orders in sufficient detail to enable work to start. These orders should include the following:

    a. commander's intent:

      (1) mission,

      (2) concept of ops:

        (a) purpose,

        (b) method, and

        (c) end state,.

    b. christen the ground in detail,

    c. brief on enemy and friendly forces,

    d. the mission,

    e. section and support weapon tasks, positions and arcs of fire,

    f. priority of work,

    g. location of company and platoon HQ,

    h. orders for sentries,

    i. track plan,

    j. open fire policy, and

k. password and recognition signals.

11.   **Confirmatory Orders**. Confirmatory orders for the occupation of the position are issued once the section commanders have completed their own battle procedure and have started work on their positions. This will usually be after the company commander has visited the position and coordinated all aspects of the company defence plan.

12.   **Briefing**. As well as giving orders to the section commanders, the platoon commander should, if possible, brief the whole platoon. This briefing should supplement rather than replace the section commanders' orders and should include:

a. the outline of the defensive plan,

b. the platoon plan in detail, and

c. the opening fire policy.

INITIAL PREPARATION

13.   **Position Confirmation.** Before digging starts, and if the tactical situation allows, it is worthwhile for platoon personnel to stand at their trench locations. This gives the platoon commander the opportunity of checking distances between sections and trenches, and gives the platoon a general idea of the defensive layout. Two minutes spent at this stage avoids any need to resite trenches once digging has begun.

14.   **Stand-to Position.** On arrival at the position each soldier is assigned a stand-to position, usually right next to his trench. Weapons and equipment are placed in the stand-to position, as he prepares his trench, with weapons pointing to the centre of each soldier's arc of fire. This ensures a minimum of confusion if the position is attacked, especially after dark. Once the trench has been dug to Stage 2, it can be used as the stand-to position, and the soldiers' equipment adjusted, as required.

15.   **Dress**. The Threat Oriented Protective Posture (TOPP) level will dictate the degree of NBC protection required while digging. As a minimum, the helmet, the rifle and the respirator will be worn whenever the soldier moves away from his position.

16.   **Sentries**. During the initial occupation, sentries should be relieved every 30 minutes, to ensure an equal distribution of work, and to ensure that all trenches are completed in approximately the same time.

17.   **Priority of Work**. Time is always an important factor when preparing a defensive position. The commander cannot expect to have unlimited time to complete all of the tasks that are required, even with concurrent activity. A priority of work is ordered to ensure that security is established and that the most important tasks are completed before the arrival of the enemy. The company commander may impose additional tasks such as patrols and work parties. The priority of work may vary according to the situation, but will typically be as follows:

   a. establish sentries, standing patrols and/or OPs;

   b. site weapons;

   c. clear fields of fire;

   d. confirm or adjust the established track plan;

   e. draw range cards;

   f. dig Stage 1 and 2 battle trenches (see annex A);

NOTE

   If the Unit Rapid Excavator or if explosives are used, battle trench stages 1 to 4 will be accomplished simultaneously.

g.   set out trip flares, claymores and anti-tank mines (mine necklaces) across high speed approaches;

h.   dig trenches to Stages 3 and 4;

i.   construct obstacle;

j.   establish communications system other than radio;

k.   prepare alternate or dummy positions;

l.   extend trenches to Stages 5 and 6; and

m.   establish latrines, refuse pits and administrative areas.

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SECTION 3

FIELD FORTIFICATIONS

THE BATTLE TRENCH

1.   **General.** The primary infantry field fortification is the two person battle trench, consisting of a shelter and a fire trench (see Figure 7-3-1) .

2.   The battle trench allows for the effective use of personal weapons and provides protection from the effects of direct and indirect fire, NBC weapons and the elements. Its simple design allows manual, explosive or mechanical excavation with minimum disruption to the ground, thus enhancing concealment and camouflage.

3.   The design also lends itself to the use of simple, light weight, easily emplaced rivetting, overhead protection (OHP) and overhead cover (OHC).

4.   The two person battle trench is constructed in stages and allows for further development. With some modification to the basic design it provides for use of all infantry support weapons. Design principles, as well as the details of revetment construction is contained in B-GL-301-002/FP-Z01. A summary is at Annex A to Chapter 7.

OBSTACLES

5.   **General.** Obstacles are sited to limit the enemy's freedom of movement by discouraging him from using an approach, by directing and canalizing him into killing zone(s) or preventing him from freely exiting them, and covering the flanks of friendly positions.

6.   Obstacles are placed in brush or long grass or blended in with the terrain, to achieve surprise. They are covered by fire, unless their intention is to harass and delay. Rifle platoons can be tasked to provide labour for the construction of battalion or brigade obstacles under the

supervision of assault pioneers or field engineers. Platoons may be given complete responsibility for the following obstacles:

a. wire fences,

b. claymore mines, and

c. protective minefields.
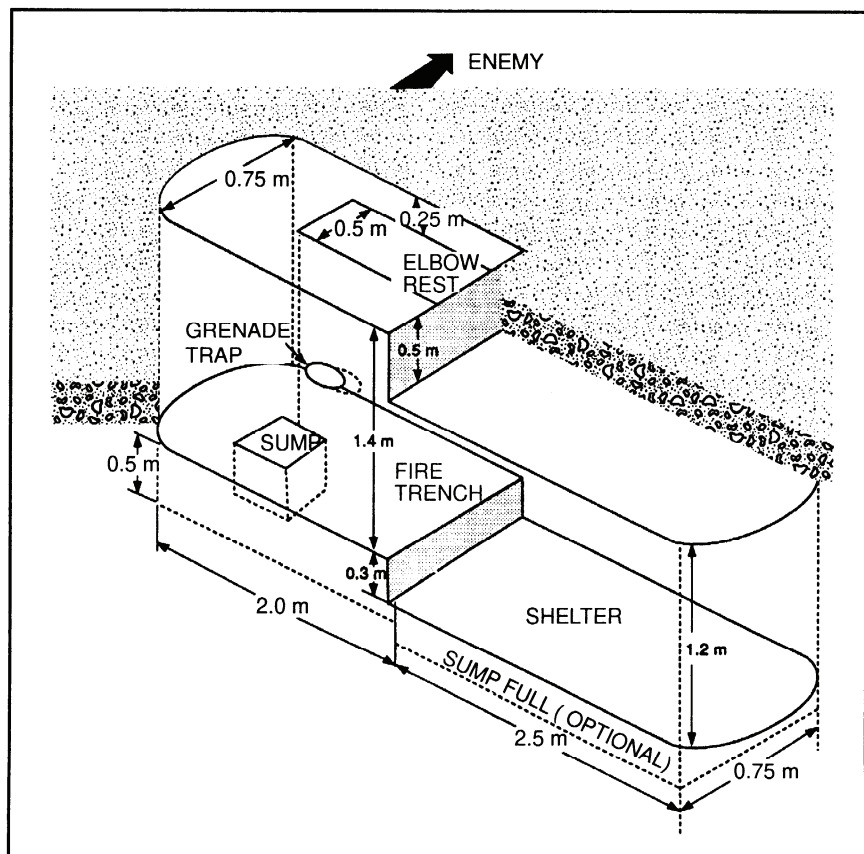
Figure 7-3-1 The Battle Trench

7.   **Wire.** Low wire entanglements and concertina fences are used to retard infantry. They may be reinforced with antipersonnel and antitank mines. So reinforced, they are effective against wheeled vehicles, and light tracked vehicles such as APCs.

8.   Concertina is effective in blocking the exits from killing zones, and covering the flanks and rear of friendly positions. Low wire can be used on the final approaches to a platoon position to disrupt an enemy assault. Wire fences should be erected outside of grenade throwing distance of friendly positions. Rifle section vehicles usually carry sufficient wiring stores for immediate protection. Stores for larger tasks, such as the blocking of killing zones must be provided from battalion resources. Details of the type and construction of wire fences are found in Chapter 4, Annex B of B-GL-301-002/FP-001 .

SHORT PICKETS SPACED IRREGULARLY AT 1.5 m to 3 m INTERVALS

MINIMUM DEPTH OF OBSTACLE 10 m HEIGHT OF WIRE SHOULD VARY FROM 0.15 m TO 0.6 m USE TREES OR BUSHES IF AVAILABLE INSTEAD OF PICKETS
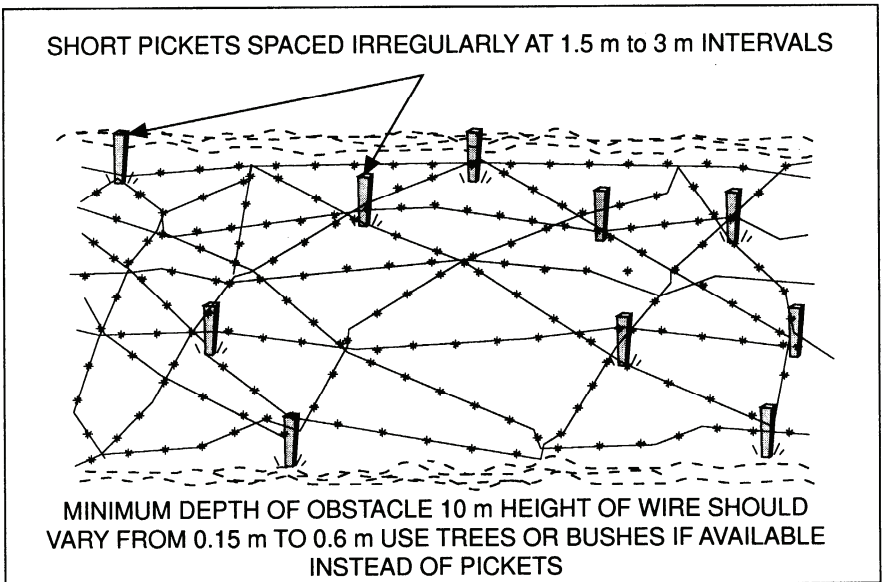
Figure 7-3-2 Low Wire
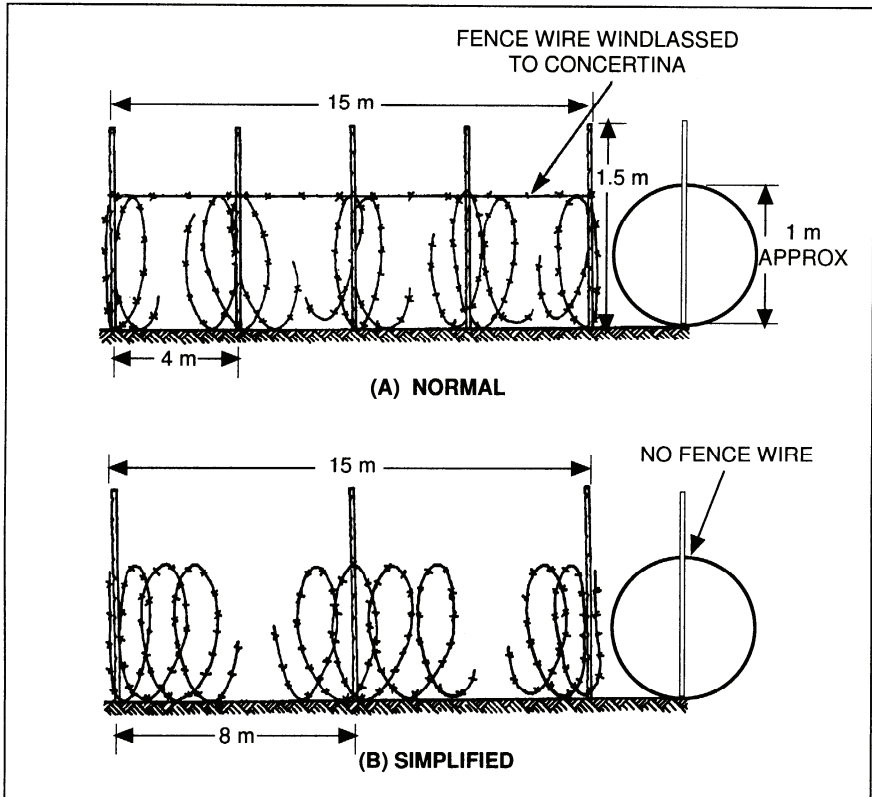
Figure 7-3-3 Single Concertina Fence

9.   **Claymore Mines.** Claymore mines can be detonated by command or trip wire. They are useful for protecting sentries, OPs and standing patrols, for guarding positions against surprise attack, and for covering dead ground and dismount areas.

10.   Each section and platoon HQ will normally carry at least one Claymore mine. When emplaced, they must be recorded on a Protective Minefield Report (CF 9471, and recovered (or handed over to

to another unit) when the platoon leaves. Instructions for the setting out and recovery of Claymores are contained in B-GL-320-010/FT-001.

11.   **Protective Minefields.** Battalions may allocate a small quantity of anti-personnel and/or anti-tank mines to the rifle companies for the construction of a local protective minefield. Often, the depth platoon will receive the task -of supplying the labour for the laying of the protective minefield. All mines must be recorded on the Protective Minefield Report (CF 947). Details on setting out procedure are found i n B-GL-320-01 0/FT-001.

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SECTION 4

ROUTINE IN DEFENCE

INTRODUCTION

1.   In some situations the defensive position may be occupied for only a few days while in other situations the position may be occupied for a considerable time. For a lengthy occupation, all available time is used in the construction of obstacles, of alternate positions and of dummy positions. A defensive routine is established as quickly as possible in order to maintain morale and preparedness. A possible routine for a 24 hour period is illustrated in Figure 7-4-1.

MUST OCCUR	MAY OCCUR
Stand to Clean weapons and equipment Meals Ablutions Section commander inspects Orders Group or briefings Improve position Patrol sweeps area Standing patrols deploy Personal administration Vehicle maintenance	Platoon commander inspects sections Communication check Clean area Company commander inspects platoon Patrols briefed

Figure 7-4-1 Sample 24 hour Routine

SENTRIES

2.   **General**. Sentries are established as soon as soldiers arrive on the position. They provide early warning of enemy approach. They also check the identity of other friendly troops in the area.

3.　　**Siting**. The sentry must be able to alert the section commander silently by day and night, without unnecessary movement. Sentry posts are sighted to provide all-around observation, although the number required depends on the company and platoon commanders'. estimates. The following can be used for planning purposes:

　　a.　**Contact Not Imminent**

　　　(1)　**Day** - one ground sentry per platoon, and

　　　(2)　**Night** - two ground sentries per platoon.

　　b.　**Contact Imminent**

　　　(1)　**Day** - one ground sentry per section, and

　　　(2)　**Night** - two ground sentries per section.

4.　　**Special Sentries**. NBC and air sentries are in addition to ground sentries. They can be teamed up with the ground sentries, or controlled at platoon level, depending on the situation. A radio watch is also maintained at platoon level.

5.　　**Sentry Orders**. Sentry orders must be carefully thought out so that nothing is omitted, left to chance or misunderstood. A section commander will normally brief his whole section at the same time, and should include the following:

　　a.　arcs of responsibility,

　　b.　range card for sentry post,

　　c.　reference points,

　　d.　location of OPs and early- warning devices in the arc of responsibility,

　　e.　flanking sentry posts,

f.   patrols, including expected time out and in,

g.   action on contact, including the setting off of a mine or early warning device, and contact to a flank,

h.   concealment and camouflage requirements,

i.   password,

j.   route to and from sentry post,

k.   location of section commander,

l.   timings and system of relief, and

m.   radio or line check procedures.

CHALLENGING BY GUARDS AND SENTRIES

6.   **Challenging.** Challenging procedures within NATO are standardized to enable allied armies to identify each other. The procedures are in STANAG 2159.

7.   The following limitations apply to the challenging procedures:

a.   **Password.** The password as well as an alternate password are set at the highest levels of tactical command (brigade or above), and changed daily at 1200 hours (local time or GMT as ordered). Alternate passwords are usually not given out below company level until they are needed. An example of a standard password sequence is as follows:

(1)   challenge - CHARLIE, and

(2)   reply - TANGO.

b. Challenges and replies should not be used forward of the FEBA except in special circumstances, e.g., RV with a patrol. Patrols may use a patrol password forward of the FEBA.

c. The words used to form a password must be easily pronounceable. The combination selected should not have an obvious connection from which, given the challenge, the reply could be guessed (e.g., Battle - Ship).

d. When forces of two or more nations or linguistic groups are in the same formation or area, great care is necessary to ensure that the password chosen is pronounceable by the nationalities concerned. In these circumstances two or more letters of the NATO phonetic alphabet must be used, e.g., challenge: BRAVO; reply: FOXTROT. (STANAG 2159)

e. For sake of clarity, both challenge and reply may be given twice.

f. The failure to give a correct reply to a challenge is not proof that the respondent is enemy because the password may not be known to some friendly troops.

g. No challenge should be made until the challenger is ready to take offensive action because the use of such challenges indicates immediately to an enemy that the originator is hostile.

8. **The procedure**. The challenging procedure will help minimize confusion and casualties particularly returning patrols.

9. The section and platoon commander is always alerted if an unexpected person or group approaches the position. Depending on the platoon commander's assessment of the situation, some or all of the platoon may be stood to.

10. The challenge is given quietly at a range that will allow the sentry (or section) to kill the enemy who attempts to run away, but not

so close that the enemy could rush the position. The standard challenging procedure is detailed in Figure 7-4-2.

11.   If the order to halt is not obeyed, it is repeated; if it is still not obeyed, then the orders for contact are followed.

SER	ACTION BY SENTRY	ACTION BY PERSON OR GROUP CHALLENGED
(a)	(b)	(c)
1	Alerts his immediate commander of the approach of a person or group and covers him/them with his weapon.	
2	Waits until the person or group approaching is within audible range, but not so close that the position can be rushed, and then orders him/them to stop with the command **"HALT - HANDS UP".**	Halts and raises hands.
3	Orders by voice or sign one person to approach - ADVANCE ONE".	Person (or group leader) advances towards the sentry's position.
4	Allows the unknown person to approach close enough for visual or voice recognition, and then orders him to stop - HALT".	Halts.
5	If he does not recognize the person, he gives the challenge quietly - e.g. **"BRAVO".**	Gives the reply - e.g. **"FOXTROT".**
6	Calls forward the remainder of the group, either as individuals - "ADVANCE ONE", or altogether - "ADVANCE" - as the situation or his orders dictate.	Second unknown person, or the remainder of the group, advances to be recognized by the sentry, assisted by the group leader who stays with the sentry until all have passed.

Figure 7-4-2 Standard Challenging Procedure

12.   **Roster**. Sentry rosters are prepared by the platoon and section seconds in command, as applicable.

13.   The length of each shift depends on the tactical situation and the climatic conditions, but should normally not exceed two hours. When two sentries are on duty, their shifts should be staggered, to ensure that one is always fresh, while the other is completely accustomed to the conditions (e.g., night vision, sounds and shapes etc).

14.   The outgoing sentry is able to wake his relief and, if necessary, guide him back to the sentry post, while his partner covers the arc. This is not possible for single sentries, who must wait for their relief to arrive, before leaving the post.

PATROLS

15.   **General**. The company commander may order a platoon to conduct standing or clearance patrols within it's area of responsibility. Platoons may also be assigned battalion or brigade reconnaissance or fighting patrol tasks, especially if they are located in depth positions.

16.   Patrolling battle procedure and conduct is discussed in B-GL-309-004/FT-001 and B-GL-318-010/FT-001.

17.   **Standing Patrols.** Standing patrols are usually established to control likely enemy approaches, either on a continuous or a periodic basis. They can be tasked as a reinforced OP, whose job is to fight for information, or as an ambush to disrupt an enemy approach.

18.   **Clearance Patrols.** Clearance patrols are tasked to sweep the platoon and company area, including the flanks and rear, to detect enemy reconnaissance elements.

19.   The clearance patrol policy will normally be established by the company commander, but could typically include after first light, before last light and after an enemy attack or other activity.

20.   The clearance patrol should be supported by designated platoon weapons or elements. The remainder of the platoon should remain at stand-to until the patrol has returned.

STAND-TO

21.   All soldiers occupy their assigned battle positions with their primaryweapons. Stand-to can be called for the following reasons:

a.   as a drill, to check battle readiness;

b.   several times during the day, when a position may be particularly vulnerable; or

c.   when an attack has been launched, or is expected.

22.   The stand-to policy is set at the battalion or company, although commanders at any level can order one. Section and platoon commanders always send a SITREP to the next higher level of command when they order a stand-to. Similarly, when they have been ordered to stand-to, they must inform their superiors when they are in position.

23.   Commanders should remember that stand-to can be disruptive to other tasks and, above all, rest. The following times are usually set for routine stand-to:

a.   soon after the completion of the position, in order to confirm locations, camouflage, etc;

b.   during the conduct of clearance patrols; and/or

c.   a half hour before until a half hour after first and last light.

CONCEALMENT

24.   Successful concealment initially depends upon the siting priority given, in the orders for the defence. Once the position has been

established, concealment depends, to a large extent, on the discipline of all troops.

25.   If the enemy is equipped with modern surveillance devices, concealment at night is as important as concealment by day. In particular, the following should be considered:

   a.   the use of camouflage netting or covers at all times;

   b.   changing foliage as soon as it withers;

   c.   selection of good thermal background or cover for heat generating equipment, such as vehicle engines, generators and stoves;

   d.   distribution of spoilage to avoid both ground and air detection;

   e.   careful selection of routes to OPs, sentry posts, platoon and company HQs and administrative areas; and

   f.   adherence to the track plan.

 ADMINISTRATION

26.   The company commander determines dress, equipment to be available and arms to be carried. This is implemented as follows:

   a.   personal kit is packed away when not in use, and rucksacks are stored in the shelter bays of the battle trenches;

   b.   fighting order, when not worn, is laid out beside the trench, or nearby where the soldier is working;

   c.   towels, clothing and sleeping bags are dried or aired out, hidden from view and under control;

d. weapons are cleaned and inspected regularly and on a staggered basis; only one LMG at a time is stripped in each section;

e. proper hygiene is practised (see Chapter 14); and

f. equipment, ammunition, rations, water, personal kit, ablution facilities and administrative areas are inspected regularly (see Chapter 14) .

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SECTION 5

CONDUCT OF THE DEFENCE

1.　　An enemy attack may be preceded by artillery and air bombardment. Soldiers seek protection under OH P, during this phase. As soon as the bombardment lifts, soldiers automatically stand-to in their fire trenches. Soldiers caught away from their trenches return to them as soon as possible.

2.　　To survive a bombardment and continue fighting requires good leadership at all levels. Aggressive, yet calm leadership by NCOs in the trenches is vital. Section commanders especially, should take every opportunity, such as a lull in the bombardment, to ensure that all of their soldiers are under OHP and that casualties are treated and evacuated as soon as possible.

3.　　Giving orders may be difficult, if not impossible during a bombardment; therefore, it is important that everyone understands the battle plan.

4.　　The initial bombardment may be followed up by a ground assault. The enemy is engaged at long range by battalion/battle group controlled direct and indirect fire. Friendly AFVs manoeuvring in and around the platoon position may draw retaliatory fire. Section and platoon commanders do not return fire, as it is quite possible that the enemy has not yet discovered the platoon position. Troops should stay under cover during this stage of the battle, to reduce the risk of casualties and detection.

5.　　Once the enemy enters the designated killing zone, the platoon prepares to engage him. This may mean the issuing of delayed fire control orders by section commanders (see Chapter 3). Fire control and strict fire discipline are critical to avoid prematurely disclosing friendly positions, especially those located in defilade to the enemy attack. The battle plan, including the opening fire plan must be followed to ensure that the en-my is full,-/ in the killing zone before the sections or the platoon open fire.

6.　　　　White light illumination must be controlled as tightly as weapon fire. Initially, it will be controlled at company level, in accordance with the battle plan. Night vision devices shall be used in conjunction with other surveillance equipment to locate the enemy prior to the use of white light. The isolated use of white light may be authorized, to check a certain area. In this case, it should be fired from defilade, to shield the source, and soldiers should be warned to close one eye to save their night vision. The general use of white light will normally be authorized once fire is opened onto the killing zone. At this point, white light should be continuous until the enemy assault has been defeated.

7.　　　　As the enemy may not attack in exactly the manner and direction anticipated, it is important that soldiers, especially those in OPs continue to observe their arcs of fire, and not become mesmerized by action in another sector. All-around observation is maintained. Orders can be passed during visits to section trenches, or by simple whistle blasts and hand signals.

8.　　　　An ideally sited position does not fire directly to the front, but engages the enemy in front of the adjacent platoon, while at the same time receiving mutual support from a neighbouring position. Once a position is under direct assault, commanders must be prepared to switch to secondary arcs, as required, to engage the enemy in the final rush. Troops in prepared battle positions must understand clearly that they have to stand fast and fight it out in their position. There must be no thought of withdrawal or looking over the shoulder.

9.　　　　Infantry trying to breach wire obstacles may be attacked with fragmentary grenades from the forward trenches, and by the platoon mortar. At night the platoon mortar has limited illumination capabilities. The enemy may cover the final assault with smoke, especially if the obstacles are effective. Thermal sights can be used to engage the attackers. Troops do not fire blindly into the smoke, for this wastes ammunition and gives away trench locations. Smoke also blinds the enemy and hides friendly positions. The enemy, attacking through smoke, is silhouetted while the soldier in the trench, using thermal sights, is hidden until the last moment.

10.   The enemy tanks will be searching for our tanks and bunkers, and will most likely not see well camouflaged troops in the forward trenches. Sections engage enemy armour with SRAAW. If the enemy does succeed in getting their AFVs onto the position, try to separate them from the dismounted infantry. Depth sections can blind the enemy AFVs with smoke grenades, and direct small arms fire at vision blocks and sights. SRAAW(L) and SRAAW(M) fire is concentrated on the sides and rear of the enemy vehicles at close range whereas SRAAW(H) can destroy tanks by firing at the front as well.

11.   The task of the platoon is to contain enemy penetration into the company area of responsibility. It can also occupy a counterpenetration or a blocking position. Blocking positions which are occupied at short notice are sited in depth, mutually supporting, and have good fields of fire at optimum antiarmour weapon range. Under truly exceptional circumstances, an uncommitted depth platoon may be ordered to conduct a hasty counter-attack against an enemy which has been almost stopped but which remains on a forward defended locality. The counter-attack party receives fire support to accomplish its task, and the company commander must be satisfied that the commitment of his depth platoon will not jeopardize his defence. Similarly, a forward platoon commander can organize a local counter-attack to take advantage of a confused enemy situation. The gains from such a move must outweigh the risk of incurring casualties by leaving the protection of the trenches. All counter-attacks are carried out quickly, and with the maximum amount of supporting fire.

12.   The speedy reaction to the enemy assault depends largely on reflex action by the members of the platoon. This is developed by realistic training. The enemy is usually within range of accurate fire for such a short period of time that each soldier must anticipate the section commander's fire order. A sudden volley of fire is more likely to disrupt the enemy assault than a scattered individual effort.

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THE BATTLE TRENCH

TWO PERSON BATTLE TRENCH

1.   The primary field fortification is the two person battle trench, consisting of a shelter and a fire trench (see Figure 7A-1). The battle trench allows for the effective use of personal weapons and provides protection from the effects of direct and indirect fire, NBC weapons and the elements. Its simple design allows manual, explosive or mechanical excavation with minimum disruption to the ground, thus enhancing concealment and camouflage. The design also lends itself to the use of simple, light weight, easily emplaced revetting, overhead protection (OHP) and overhead cover (OHC). The two person battle trench is constructed in stages and allows for further development. With some modification to the basic design it can be used for all infantry platoon weapons. Design principles, as well as the details of revetment construction are contained in B-GL-301-002/FP-Z01. They are repeated at appendix 1 to Annex A for ease of reference.

CONSTRUCTION CONSIDERATIONS

2.   The battle trench is level with the ground to restrict air and ground observation. Revetment is required to prevent trench collapse during construction and, more importantly, collapse under the heavy weight of indirect fire. Revetment is internally braced to maximize structural strength and minimize the target area. Trenches that are to be revetted must be dug wider to ensure a finished width of 0.6 metres. Internal bracing methods are preferable to the external method using wire and pickets. The preferred rivetting material is Split Hairpin Shelter (SHS). Other materials include:

   a. Support Kit Overhead Protection (SKOP),

   b. corrugated galvanized steel (CGI) sheets,

   c. steel pickets,

d. chicken wire with canvas and hessian,

e. plywood and timber, and

f. heavy cardboard.
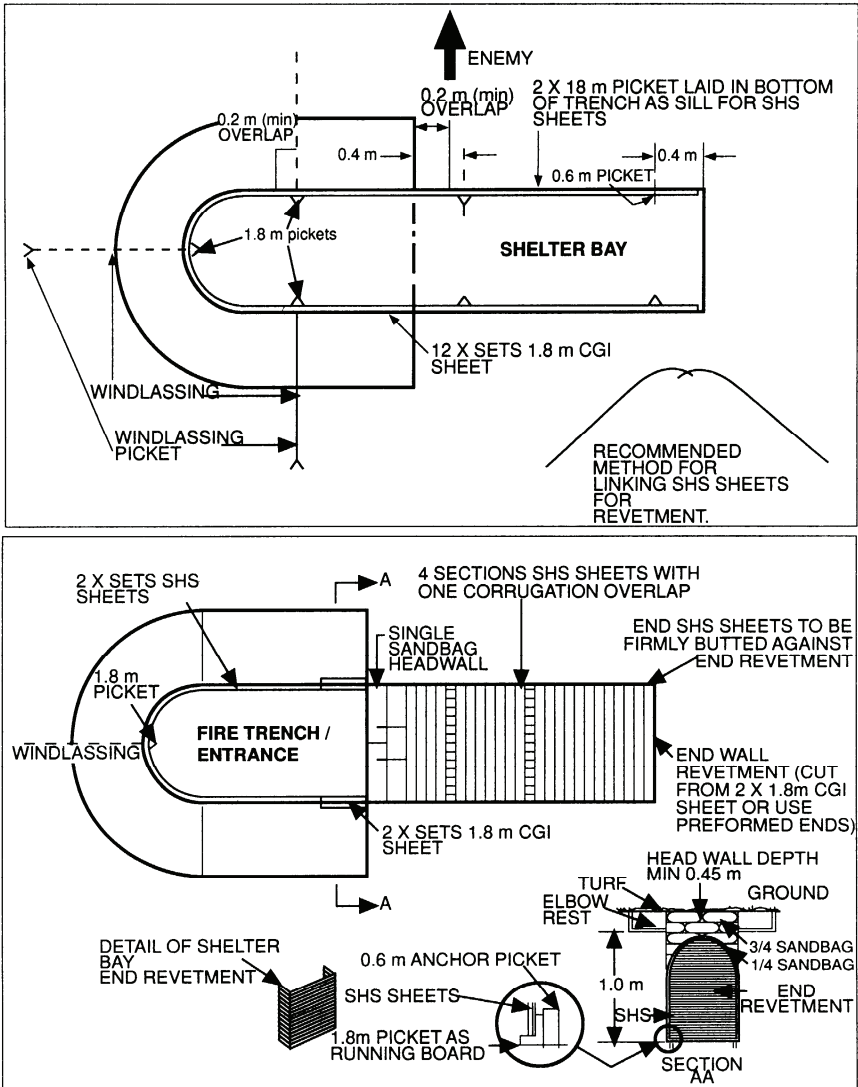
Figure 7A-1 The Battle Trench

3.   **Construction**. The battle trench is constructed with rounded ends in order to provide as much inherent strength as possible to counter the effects of blast. Split Hairpin Shelters incorporate this feature and should be used as revetment whenever possible. The trench is constructed in the following stages:

    a. **Stage 1 - Shell Scrape**. A shell scrape is 2 metres long, 0.75 metres wide, sufficiently deep for protection while in the prone position, and is oriented towards the enemy. It is dug when in contact with the enemy or when the position will not be further developed (e.g. during a hasty defence) (Figure 7-6). If further development is planned, the side of the shell scrape is oriented towards the centre of the arcs of fire.

    b. **Stage 2 - Fire Trench**. A fire trench is excavated 1.6 m long, 0.75 m wide and 1.4 m deep; or at least arm pit depth.

    c. **Stage 3 - Revet Fire Trench.** Revet the fire trench and dig out an elbow rest 0.25 m deep and 0.45 m wide. This serves to lower the profile of the occupants when firing their weapons.

    d. **Stage 4 - Shelter Bay OHP.** The shelter is developed from the shell scrap or by enlarging either end of the fire trench by 2.4 metres in length and 1.2 m in depth. Revetment is then added and covered with 0.5 m of packed soil.

    e. **Stage 5 - OHC**. OHC is added to the fire trench.

    f. **Stage 6 - Improvements**. Ammunition bays, grenade traps, drainage sump and communications trenches are added as required. The development of crawl trenches, communications trenches and section shelters is detailed in B-GL-320-007/PT001.

NOTE

When mechanical or explosive means are used for excavation, Stages 1-4 are usually completed at the same time.

4.   **Parapets.** Parapets are only used to construct selected defilade crew served weapon positions, to reduce silhouette by developing background where none exists, or to build-up when it is impossible or extremely difficult to dig. Careful siting and natural features should be used wherever possible to avoid the construction of parapets. Above ground construction is highly susceptible to blast effects and attracts enemy fire.

5.   **Overhead Cover.** OHC is a light, easily removable covering. It must not be confused with overhead protection which is discussed in the next paragraph. It is normally used for shelters until OHP can be provided, or to provide protection for fire trenches or weapon pits where OH P would interfere with the operation of the weapons or equipment. Its purpose is to provide:

   a. a shield against the heat effect of nuclear weapons;

   b. a shield against liquid chemical agents;

   c. concealment, especially from the air; and

   d. protection from the elements.

6.   **Overhead Protection.** Overhead protection is required primarily for protection from fragments from direct and indirect fire. A minimum of 0.3 m of fill is essential for protection, while a depth of fill of 0.5 m of packed earth or sand over the shelter portion of the trench is desirable.

7.   **Grenade Sump.** This is a small hole excavated near the bottom of the trench, into which any grenades entering the trench are thrown to reduce blast and shrapnel effects. Dimensions are 0.5 m deep, 0.3 m in diameter, at 45 ° into the ground, and oriented so as to direct blast and shrapnel onto the back wall of the trench, see Figure 7A-2.

8.   **Drainage.** This can be accomplished with a sump. The simplest form of sump is a hole dug in the floor of the excavation, and filled with easily drained materials such as stones or broken bricks (see Figure 7A31. The hole should be a minimum of a 0.3 m cube for a battle trench. Fist sized stones are the largest which should be used, with smaller ones placed on top. If stones are not available, any material can be used that will keep the sump open, such as tin cans or brush. The sump should be dug at the low point of the floor. In larger excavations it may help to dig channels to direct water to the sump. If the soil is one that does not drain easily, such as a heavy clay, sumps will be of little value. In such cases, a raised flooring of brush and timber or similar material should be used.

9.   If the trench is excavated by mechanical means, or if time permits, all, or a portion of, the trench and shelter may be dug 0.5 m deeper and the entire area used as a sump. Sand bags or rocks may be used for fill.

10.   **Camouflage.** Before any excavation is started, all natural materials, such as turf, leaves, forest humus, or snow should be removed and placed aside to be used later for restoring the natural appearance of the terrain. Spoil should be piled on a ground sheet, or other suitable material, and removed and camouflaged.
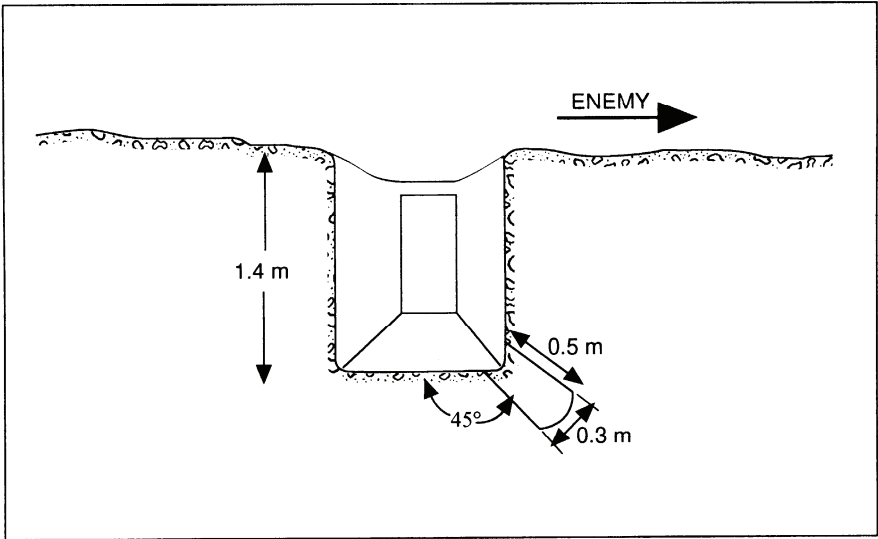
Figure 7A-2 Grenade Sump
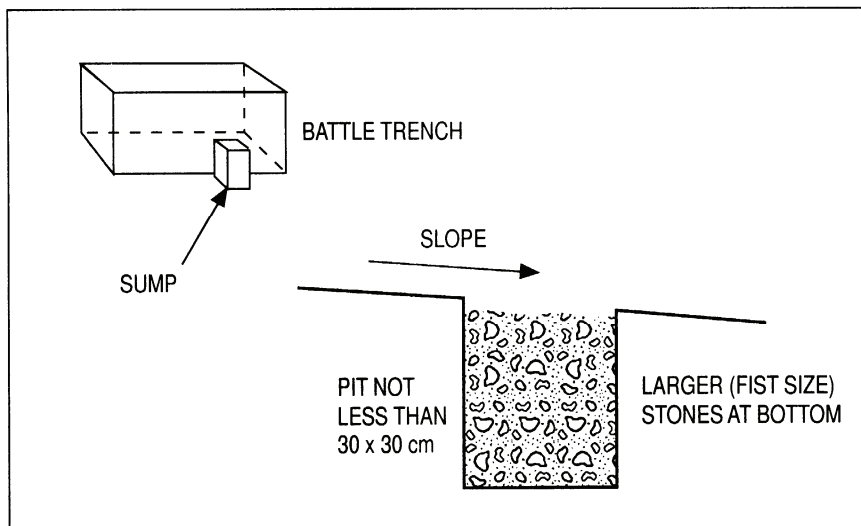
Figure 7A-3 Drainage Sump

COMMUNICATION TRENCHES

11.   A communication trench network can be developed to join section and platoon battle trenches. Figure 7A-4 shows a section trench layout. Figure 7A-5 gives measures for the construction of the communication trench. Overhead protection should be installed at key points along the communication trench if time permits. This will afford soldiers a place to obtain cover should they be caught between trenches during artillery, mortar or air attack. When time is short, crawl trenches such as that shown in figure 7A-6 can be prepared. These can later be developed as communication trenches.
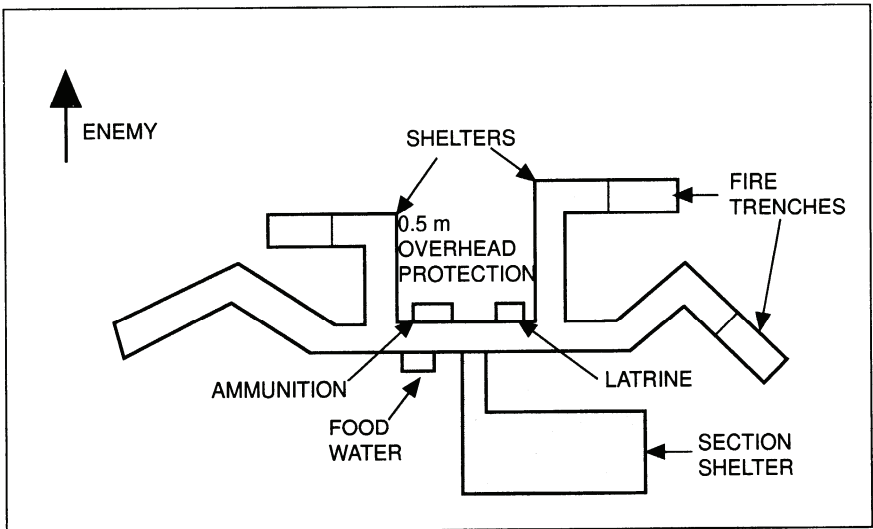
Figure 7A-4 Section Defensive Layout showing Communication Trench Network.
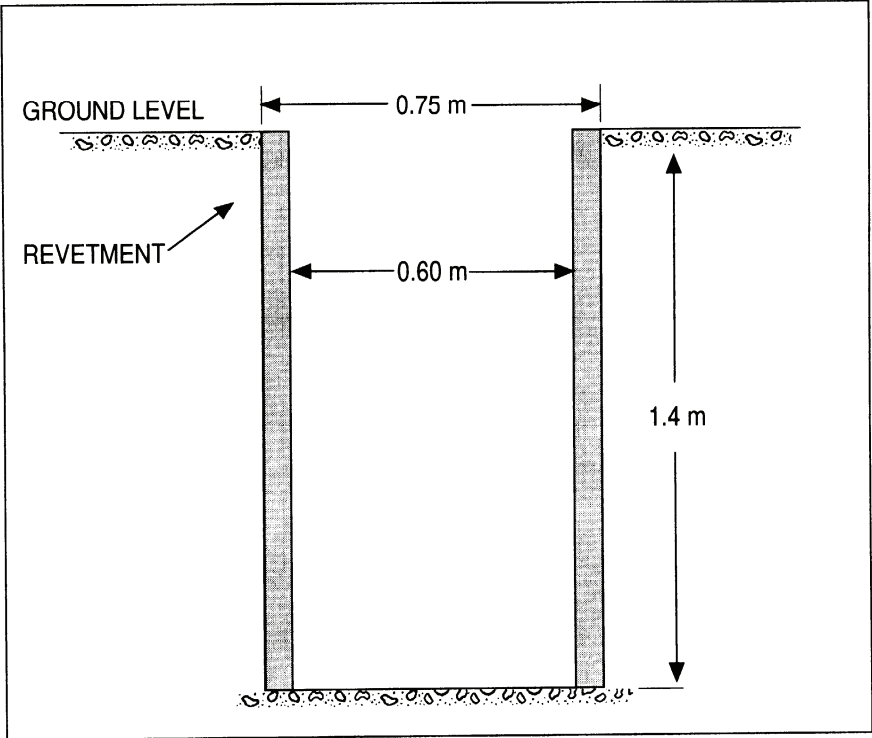
Figure 7A-5 Communication Trench
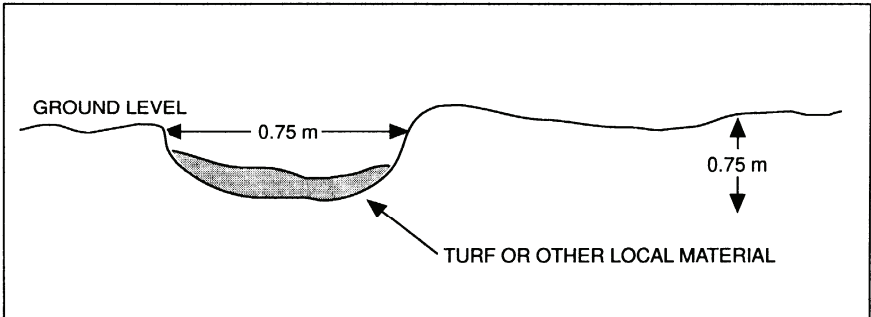
Figure 7A-6 Crawl Trench

GPMG (SF) (C6) BATTLE TRENCH

12.   The GPMG (SF) is an adaptation of the two person battle trench design. The modifications include:

a.   increasing the length of the shelter bay to 2.8 m (five vice four Shelter Hairpin Sheets for increased ammunition;

b.   positioning the fire trench to the right of the shelter (ammunition feed is from the left on the GPMG (SF);

c.   adding 0.6 m by 0.6 m section for loader access;

d.   modifying the elbow rest into a gun platform for the tripod;

e.   increasing the length of the fire trench to 2.0 m. Material/stores and design for the GPMG (SF) battle trench are contained in appendix 2.

SRAAW(H) BATTLE TRENCH

13.   The SRAAW(H) battle trench is similar to the two person battle trenchdesign. The differences include:

a. increasing the length of the shelter bay to 2.8 m (five vice four Shelter Hairpin Sheets for increased ammunition holdings; and

b. positioning the fire trench to the left of the shelter bay (loader loads the SRAAW(H) from the right. Materials/stores and designs for the SRAAW(H) battle trench is contained in appendix 3.

c. modifications will be required to accommodate the ERYX tripod.
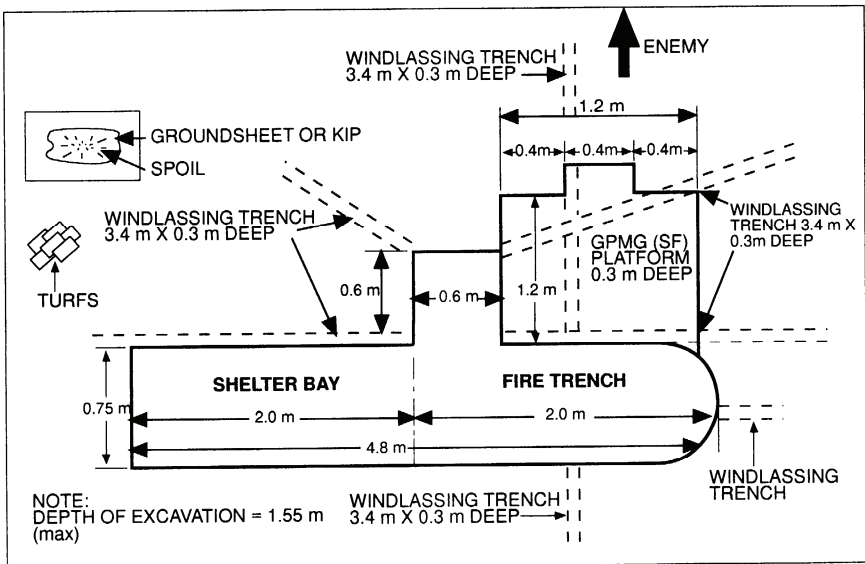
Figure 7A-7 GPMG (SF) Battle Trench
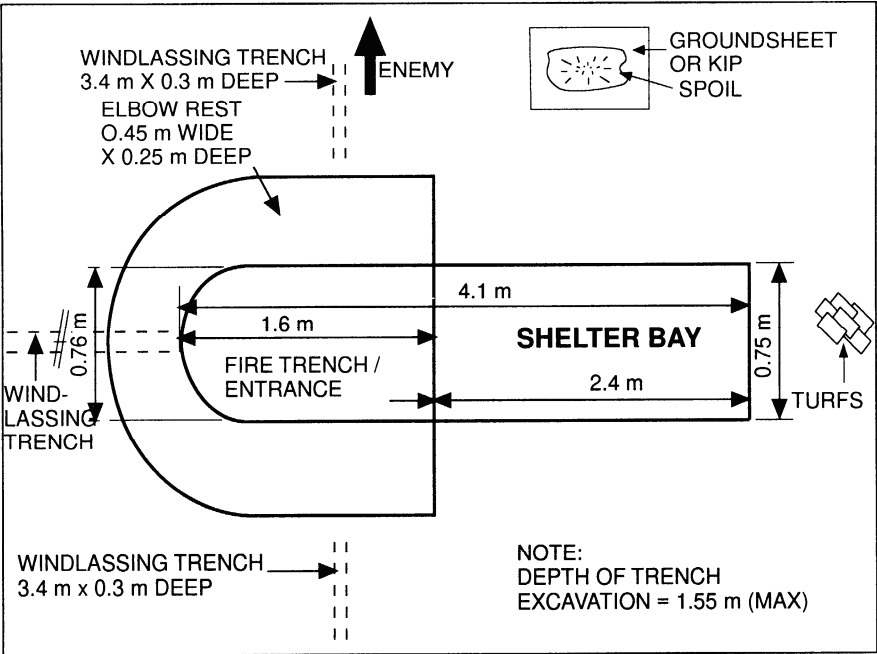
Figure 7A-8 SRAAW(H) Battle Trench

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MATERIAL/STORES FOR THE TWO PERSON BATTLE TRENCH

1.   The following material/stores are required:

ITEM	MATERIAL/STORES	QUANTITY	WEIGHT (KG)
1	Shelter Hairpin Sheets (0.66 m x 1.1 m)	12	92.6
2	CG I sheets (O.66mx1.8m)	6	43.5 (Note 1)
3	Long pickets (1 .8 m)	7	36.4 (Note 2)
4	Short pickets (0.6 m)	9	15.3 (Note 3)
5	Windlassing Wire	40 m	1.0
6	Sandbags	18	2.0
		TOTAL	190.8 (Note 3)

Notes: 1.   If preformed end sheets are used, the quantity of 1.8 m CG I decreases to four sheets. The weight of the end sheets is approx 8.0 kg.

2.   If an other material is employed as shelter bay sills, the quantity of 1.8 m and 0.6 m pickets can be reduced to 3 and 7 respectively.

3.   If items in Notes 1 and 2 are employed, the total weight can be reduced to approx 170 kg.

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MATERIAL/STORES FOR THE GPMG(SF) BATTLE TRENCH

1.   The following material/stores are required:

ITEM	MATERIAL/STORES	QUANTITY	WEIGHT (KG)
1	Shelter Hairpin Sheets (0.66 m x 1.1 m)	14	108.6
2	CGI sheets (0.66 m x 1.8 m)	8	58.0 (Note 1)
3	Long pickets (1 .8 m)	11	57.2 (Note 2)
4	Short pickets (0.6 m)	13	22.1 (Note 3)
5	Windlassing Wire	100 m	2.5
6	Sandbags	18	2.0
		TOTAL	249.8 (Note 3)

NOTES: 1.   If preformed end sheets are used, the quantity of 1.8 m CGI decreases to four sheets. The weight of the end sheets is approx 8.0 kg.

2.   If an other material is employed as shelter bay sills, the quantity of 1.8 m and 0.6 m pickets can be reduced to 7 and 11 respectively.

3.   If items in Notes 1 and 2 are employed, the total weight can be reduced to approx 230 kg.

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**MATERIAL/STORES FOR THE SRAAW(H)
AND MRAAW BATTLE TRENCH**

1.   The following material/stores are required:

ITEM	MATERIAL/STORES	QUANTITY	WEIGHT(KG)
1	Shelter Hairpin Sheets (0.66 m x 1.1 m)	14	108.6
2	CGI sheets (0.66 m x 1.8 m)	6	43.5 (Note 1)
3	Long pickets (1 .8 m)	7	36.4 (Note 2)
4	Short pickets (0.6 m)	9	15.3 (Note 3)
5	Windlassing Wire (barbed)	40 m	12.7
6	Sandbags	18	2.0
		TOTAL	206.8 (Note 3)

NOTES: 1.   If preformed end sheets are used, the quantity of 1.8 m CGI decreases to four sheets. The weight of the end sheets is approx 8.0 kg.

2.   If an other material is employed as shelter bay sills, the quantity of 1.8 m and 0.6 m pickets can be reduced to 7 and 11 respectively.

3.   If items in Notes 1 and 2 are employed, the total weight can be reduced to approx 186 kg.

4.   The materials and stores required consist of a Two Person Battle Trench Type 3 (CDN) supplemented by two SHS sheets.

TYPE AND CONSTRUCTION OF WIRE FENCES

1.   This annex is an extract from B-GL-320-007/PT-001, Field Defenses and Obstacles, chapter 8.

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CHAPTER 8

TRANSITIONAL STAGES IN OPERATIONS

SECTION 1

INTRODUCTION

1.   This chapter examins the participation of the platoon in all transitional stages in operation. Transitional stages are those which permit the passage from one type of operation to another. They are:

    a. advance to contact,

    b. meeting engagement,

    c. relief of troops in combat, and

    d. withdrawal.

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SECTION 2

ADVANCE TO CONTACT

GENERAL

1.   The advance to contact gains or re-establishes contact with the enemy under the most favourable conditions for the main force. It is a preliminary always executed in preparation for a subsequent operation and it includes movement forward before and after contact has been made. It ceases when determined enemy opposition is met to the point where the deployment and coordinated effort of the entire unit is required, or when the main body is positioned in accordance with the commander's plan.

2.   The advance to contact enables the force to seize and maintain the initiative. The operation may involve destroying or forcing the withdrawal of minor enemy elements, or seizing ground of tactical importance. Enemy protective elements are destroyed or neutralized without impeding the movement of the main body: this implies that sections and platoons conducting a series of hasty attacks.

ELEMENTS

3.   In the advance, the tempo changes with the situation. Bold rapid action by junior leaders, with a full understanding of the purpose, method and end state, is required in order to surprise the enemy and keep him off balance. The advancing force must therefore be highly mobile, aggressive and balanced. A brigade group advancing to contact should incorporate the following elements:

a.   **Covering Force.** The composition, size and operations of the covering force may influence the entire course of battle. Its mission is to obtain information on the enemy and to prevent unnecessary delay of the main body. It should be a highly mobile, well-balanced force, capable of attacking and destroying enemy reconnaissance elements, securing and holding key terrain, and containing forward enemy units.

b.   **Advance Guard.** The advance guard moves quickly but prudently, maintaining contact with the covering force, and providing security to the immediate front of the main body. A battle group advance guard is made up of the Vanguard (a combat team or company group) and the Main Guard (the remainder of the battle group). The vanguard will deploy a point platoon. The point platoon will, in turn, deploy a point section.

c.   **Flank and Rear Guards.** Flank and rear guards protect the main body from ground observation and surprise attack. They should be strong enough to defeat minor enemy forces, or to delay strong attacks until the main body can deploy.

d.   **The Main Body.** The main body contains the main combat power of the force. Its units are organized into combined arms elements and are so positioned in the advancing columns to permit maximum flexibility for employment during the movement or once contact with the enemy is established. The position of the main body in relation to the covering force and advance guard is an important decision for the commander.

4.   The platoon, as part of a combat team or company group, may participate in any one of the elements of the advancing force. This section will study the section and platoon as part of the vanguard. The battle techniques employed by the infantry section and platoon during the advance are covered in chapter 5 - Battle Techniques.

COORDINATION

5.   Prior to H hour, the section moves tactically toward the line of departure. As the section approaches the line of departure, the section commander continuously gives anticipatory orders, modifying them as the ground or enemy changes. He continuously looks ahead,

christening the ground as the section advances. His anticipatory orders may include:

    a. axis of advance,

    b. reference points,

    c. bounds,

    d. possible enemy locations,

    e. actions if under effective enemy fire, and

    f. confirmation that everyone understands (especially the 21C).

6.   The speed and momentum of the advance to contact is balanced by security and protection. The best possible speed is maintained. This rate is continued until contact is made. Scouts are used to the maximum. Examples of anticipatory orders are at figure 8-2-1.

Example 1	Example 2	Example 3
"1 Section, Centre of axis - FARM. 1 /4 right - green building - will be known as SHED. Our next bound will be to the fence line."	"2 Section, 100 metres - 1/4 left, ruined building. Take up fire position to cover Group 1's advance to CREEK BED. Move now"	"3 Section, slightly right of centre of axis, small green scrub called sCRUB. If we come under fire from SCRUB, Group Two to provide covering fire from the high ground to your front.

Figure 8-2-1 Examples of anticipatory orders.

NOTE

Orders must be shouted only sufficiently loud to be understood by the those who will execute them. The volume must not be such as to unduly compromise security and surprise.

ADVANCE IN CONTACT

7.   Once enemy contact is made, the rate of advance is slowed but momentum must be maintained to keep the enemy off balance. The section advances using fire and movement taking into consideration the following:

a.   that bounds depend upon positions of fire and observation as well as areas of affordable cover;

b.   visual contact is maintained between groups and teams within a group;

c.   use hand signals where appropriate;

d.   give sufficient time and cover by fire for groups and teams to move to the next bound; and

e.   take advantage of protective fire and move the section forward at top speed to the next bound.

8.   The battle drills for section and platoon during the advance to contact and the pursuit are explained in chapter 5 - Battle Techniques.

SECTION 3

MEETING ENGAGEMENT

1.   The meeting engagement differs from the advance to contact in that in the advance to contact, the commander's aim is to deliberately establish contact with the enemy, whereas a meeting engagement will occur unexpectedly.

2.   A meeting engagement occurs when a moving force incompletely deployed for battle, engages an enemy at an unexpected time and place. The basic principle in a meeting engagement is the seizure and retention of the initiative. Thus the commander can regain or retain freedom of action and subsequently adopt the best course of action to accomplish his original mission.

3.   At the platoon and section levels, the reaction to a meeting engagement is quick and violent. Confusion may ensue and there is a need to regain control through decisive orders and strong leadership. The section/platoon commander must assess the situation quickly, accurately, and then pass this information to the platoon/company commander.

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SECTION 4

RELIEF OF TROOPS IN COMBAT

GENERAL

1.   Relief operations are of three types:

   a.   **Relief in place**. An operation in which all or part of a force is replaced in a sector by an incoming unit.

   b.   **Forward Passage of Lines**. An operation in which an incoming force attacks through a unit which is in contact with the enemy.

   c.   **Rearward Passage of Lines.** An operation when a force effecting a movement to the rear passes through the sector of another occupying a rearward defensive position.

2.   Relief operations are conducted to sustain the overall level of combat power. Inherent in these operations is the transfer of operational responsibility for mission. They are undertaken when forces:

   a.   are unable to continue with their mission;

   b.   are required for operations in another area;

   c.   have accomplished their mission;

   d.   are due for rotation to avoid exhaustion; or

   e.   are not suitable to accomplish the new task.

3.   The following considerations are important:

   a.   Security and protection. The intention to conduct a relief of troops in combat must be concealed from the enemy.

Deception measures should include the continuation of normal patterns of activity. Additional protection may be required due to the increased vulnerability during the operation.

b. **Early liaison**. Close cooperation and coordination are required at all levels and at an early stage between the troops in position and those that are moving. As much detailed reconnaissance as the tactical situation allows must be made by an incoming organization down to section level if possible.

c. **Allocation of routes and areas**. These will be coordinated at the unit and sub-unit levels and given in the company commander's orders.

d. **Timings.** The detailed timing of the operation will be made with the guidelines given by the company commander.

e. **Fire support**. The unit in position will always provide fire support for the moving unit.

RELIEF IN PLACE

4.   In the relief in place, the incoming platoon assumes the mission of the relieved platoon, usually within the same boundaries and, at least initially, with a similar disposition of troops. Whenever possible, the relief should be conducted at night or during periods of reduced visibility, particularly when the enemy is close.

a. **Security**. The platoon commander must guard against too much movement, poor battle discipline by the advance party, and poor radio discipline, especially when the relief is in progress.

b. **Time and Speed.** The relief must be carried out in the shortest possible time while maintaining silence and control. Battle procedure must allow sufficient time at all levels for a detailed handover of essential information, in particular:

    (1)   the current tactical situation,

    (2)   the current operation orders and plans,

    (3)   the organization of the area and location of facilities and routes,

    (4)   the sequence of relief, and

    (5)   the time of transfer of command.

c. **Control**. Control must be maintained throughout the operation. The outgoing platoon commander remains in command of the position up to the time of passage of responsibility. The plan must be simple, well coordinated between the two commanders and contain arrangements for guides, check points, route plan and route marking, method of transport and movement, patrols, diversions and other control measures: it must be understood by all ranks.

d. **Continuation of normal activities.** Normal daily activities must continue before and after the relief operation. Should the enemy suspect that a relief operation is in progress or has recently occurred, he will undoubtedly launch an offensive operation before the new defenders can get properly organized.

PLANNING AND PREPARATION

5.   **Warning Order**. The battalion should normally receive its warning order about 48 hours in advance. The platoon commander will be given all available information by his company commander. After passing this information on to his second in command and section commanders, he will recce with the advance party. The advance party

should contain as many commanders as possible, to help ensure maximum coordination and a quick hand over of responsibilities during the actual operation. The exact composition of the advance party **will** be specified in the company commander's warning order or be laid down in battalion SOPs: it may vary depending on the situation and may include:

a. **Normal** - Platoon commander, communicator or runner;

b. **Ideal** - Platoon commander, communicator or runner and Section Commanders (especially if the platoon is in a forward company location); and

c. **As Required** - in addition to the above mentioned, Commanders for standing patrols and OPs.

6.   Whenever possible, the platoon commander (and section commanders if they are along) should see the terrain in daylight. Should this not be possible, or should the relieving sub-unit require more time for familiarization, the relieved sub-unit may be asked to leave a rear party to carry out the necessary orientation.

7.   **Advance Party Duties.** During the reconnaissance, the platoon commander should shadow his counterpart in the battle area to get the maximum possible information about the position and the enemy. He must ensure that all necessary arrangements are made to enable the relief of the platoon to be carried out swiftly and smoothly. To that end he should list all the points on which information is needed before he leaves with the advance party as they may not all come to mind during the actual reconnaissance. A non-exhaustive list is presented at annex A as an aide-mémoire.

PLATOON PREPARATIONS

8.   While the platoon commander is away with the advance party, the platoon second in command ensures that the normal administrative preparations are completed.

9.   The platoon commander will brief his platoon if possible before he leaves with the advance party. If time allows, he should return to give any final briefing and then go back to the new position. Should he not be able to return to the platoon position, the briefing will be given by the company second in command. In addition to details of the new position, the following should be included in this briefing:

   a.   an explanation of the terrain layout, the procedure for relief and the system of check points and RVs;

   b.   action if attacked during the relief;

   c.   action to take on encountering illumination and shelling; and

   d.   emphasis on silence, keeping contact with the soldier in front, and speed of occupation.

10.   Rehearsals conducted by the platoon second in command should include the drill for taking over platoon and section localities in detail.

RELIEF PROCEDURE

11.   **Control Points.** The following control points will affect the incoming platoon (Figure 8-4-1):

   a.   **Dismount Point.** If the initial move forward is in vehicles, the dismount point will be as far forward as possible without compromising security. The company with its supporting detachments will arrive under command of the company second in command. An officer and a protection party from the incoming battalion will command the dismount point. A guide from the outgoing battalion will be assigned to lead the company forward or to a dispersal area if there is any hold-up.

   b.   **Battalion Check Point.** The battalion check point is set up so that the commanding officer can check the progress of the relief. There is no halting at this check point and companies

march straight through. This point may not always be established, especially in mechanized operations.

c. **Incoming Company Check Point.** The company check point is where the platoon commander, his communicator and a guide from the outgoing platoon meet the platoon. The outgoing platoon guide leads the platoon to the platoon check point. The platoon commander should move behind the lead section to reduce the chance of the guide and himself becoming casualties at the same time, while the platoon second in command checks the platoon through the company check point and brings up the rear. The company sergeant-major of the outgoing company will be in charge of the incoming company check point. Also waiting at the company check point are:

(1) the company commander and his communicator,

(2) the other platoon advance parties,

(3) a guide for each platoon from the outgoing unit, and

(4) NCOs in command of support weapons in the company area.

d. **Incoming Platoon Check Point**. The platoon check point is located close to the outgoing platoon locality. The platoon commander should have chosen a platoon dispersal area for use in the event of a hold-up. There is no halting at the check point; sections are led off to their respective positions. Platoon guides from the outgoing platoon meet the sections and guide them forward.

ACTION IN PLATOON AND SECTION LOCALITIES

12.   As the relief begins, the company/platoons to be relieved stand to.

13.   During the reconnaissance, the advance party details which members of the incoming section are to occupy which trench. As the

sections arrive, the outgoing section commander meets and leads them to their trenches in pairs or more as the case may be.

14.   On reaching the trenches, the incoming troops enter the trench at once to avoid exposure. They keep clear of personal kit belonging to the outgoing section which will be standing-to during the relief. Soldiers may be required to crawl forward to avoid detection by the enemy. If space in the battle trench is insufficient to permit the incoming troops to adopt a stand-to position, they exchange places with the outgoing soldiers.

15.   The outgoing and incoming section commanders then move to each trench and brief the troops on arcs of fire, important details of the defence, the range card, the location of flanking trenches, the section commander's trench and the route to platoon HQ; weapons detachment personnel will normally exchange GPMG tripods and aiming posts.
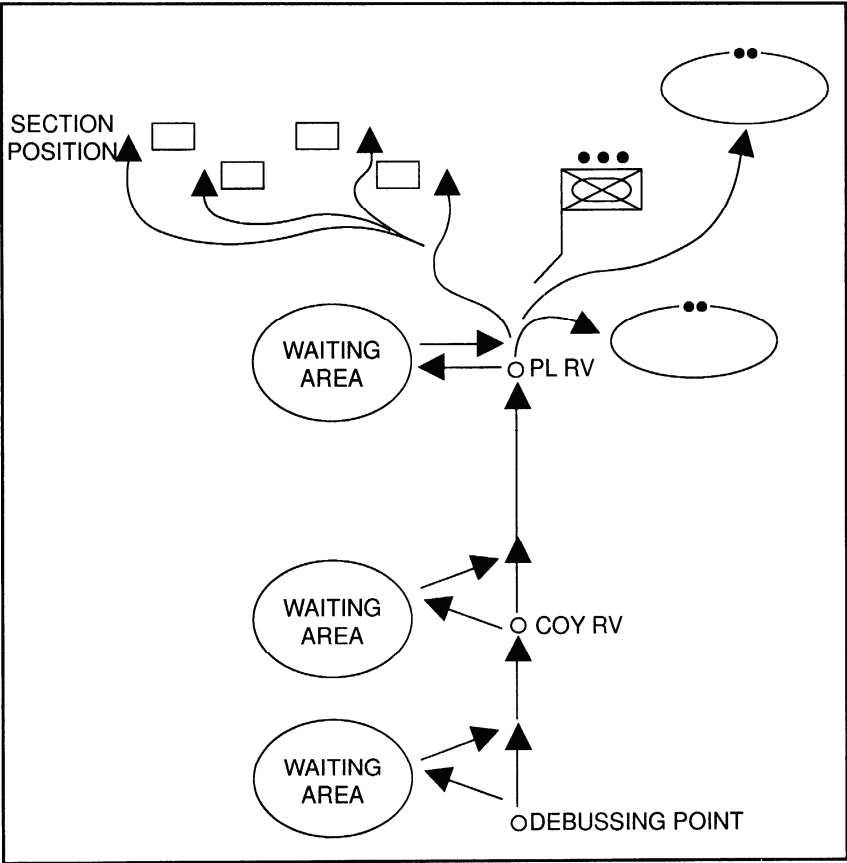
Figure 8-4-1 Control Measures For A Relief in Place Operation

16.   **Procedures for relief.** The sequence of events at the platoon level is explained below.

a.   As soon as the incoming section commanders report that they are ready to take over, the incoming platoon commander advises his company commander, and awaits the order to complete the relief.

b.   When the change-over is ordered the two platoon commanders remain together at platoon HQ ready to handle any emergency, while either:

(1)   the incoming section commanders, when they return to their position, give the order to the outgoing section commanders to change; or

(2)   the two platoon second in commands move round the position to give the order to change (this is a good opportunity for the incoming second in command to see the position).

c.   The outgoing platoon withdraws in accordance with normal withdrawal drills (see Section 5), covered by the incoming platoon.

d.   When all sections have withdrawn through section check points to the platoon RV, the outgoing platoon HQ withdraws to join them there. The platoon does not wait there longer than is necessary to ensure that it is complete before moving on to the company RV, following the normal withdrawal procedure.

e.   After the outgoing platoon has left, the incoming platoon commander reports to the company commander that the relief has been completed. Two runners are sent to company HQ: one will stay, the other will come back. This ensures that at

least two platoon members know the route. The runner to come back will usually be the one who was with the platoon commander on the advance party.

f.   The incoming platoon remains stood-to until the outgoing unit is clear of the battle position; the order to stand down and adopt normal sentry routine will be given by the company or combat team commander.

COMMUNICATIONS

17.   There are three means of communications available during the relief and they should be used in the following order of priority:

a.   line,

b.   outgoing company's radio net, and

c.   incoming company's radio net.

18.   Radio traffic must be kept at the normal level so as not to arouse the enemy's suspicions. When this cannot be ensured, traffic must be confined to the outgoing battalion's net which is already known to the enemy and this net monitored by the incoming unit. The incoming battalion must keep radio silence for as long as possible.

PROTECTION DURING RELIEF

19.   Before the relief, the incoming battalion arranges for the protection of its dismount point and check-points. Protection for the relief itself is given by standing and fighting patrols:

a.   **Standing Patrols.** A standing patrol can be changed during the relief in company areas after the incoming platoons have taken over. If possible, however, these patrols should go forward with the advance party and be in position before the main relief begins.

b. **Fighting Patrols**. Responsibility for providing fighting patrols lies with the outgoing battalion unless the commanding officers agree otherwise. These patrols should stay out all night and rejoin their own battalion next day. If these patrols came from the incoming battalion, patrol commanders and members of the patrol must go forward with the advance party and be given the usual opportunities for reconnaissance and briefing. It is helpful if these patrol commanders can go out the night before with a patrol from the outgoing battalion.

CHANGE OF COMMAND

20.   The arrangements and time for the change of command are agreed between the commanding officers before the relief takes place and orders for it are issued down to platoons. Command normally passes at each level as follows:

a.   platoons, when two or more sections have been relieved;

b.   company, when two or more platoons, including the forward platoons, have completed relief; and

c.   battalion, when two or more companies, including the forward companies, have completed relief.

COMBAT SERVICE SUPPORT

21.   During a relief operation, the incoming unit should be fully replenished. The higher headquarters may direct that the forces being relieved hand over stocks that are not required for their subsequent mission.

RELIEF BY A MECHANIZED PLATOON

22.   The relief of one mechanized infantry platoon by another requires minor variations, but the procedures mentioned in this section apply. The enemy must not be presented with a lucrative target, therefore platoons should be relieved individually within combat teams.

Positions will be more dispersed and distances to rendezvous greater. The greatest problem will be the noise made by APCs so a covering artillery fire plan may be necessary.

SECTION 5

PASSAGE OF LINES

CONTROL AND COORDINATION CONSIDERATIONS

1.   A passage of lines is the movement of a unit through another unit either to come into (forward passage) or out of (rearward passage) contact with the enemy.

2.   The success of a passage of lines depends on establishing the correct control measures and effective coordination between the commanders concerned. Based on the mission statement, the following points should be considered in the planning process:

    a. Exchange of plans/information:

        (1) tactical situation,

        (2) action on contact,

        (3) intelligence,

        (4) obstacles,

        (5) deception, and

        (6) disposition.

    b. Movement:

        (1) selection of routes and waiting areas,

        (2) location and routes though obstacles,

        (3) priority for use of routes and waiting areas,

        (4) provision of guides and traffic control,

(5)   timings for movement, and

(6)   contact points.

c. Tactical support:

(1)   type and location,

(2)   timings,

(3)   control, and

(4)   attack positions and lines of departure for a forward passage.

d. Administrative support:

(1)   medical,

(2)   combat supplies,

(3)   vehicle recovery,

(4)   military police,

(5)   prisoners of war,

(6)   sharing administrative areas,

(7)   location of echelon and support units, and

(8)   civilian and straggler control.

e. Command and control:

(1)   time or circumstances of change of command,

(2)   communications including Communications-Electronics Operating Instructions (CEOI) and call signs,

(3)   recognition and passwords,

(4)   provision of liaison officers and interpreters, if necessary, and

(5)   reconnaissance arrangements.

3.   If the movement is a forward passage of lines, the platoon commanders reconnoitre the routes. In the rearward passage, the seconds in command reconnoitre the routes.

FORWARD PASSAGE OF LINES

4.   A forward passage of lines is an operation in which an incoming force attacks through a unit or sub-unit which is in contact with the enemy. The platoon may be part of the in-place force, or part of the attacking force. The considerations explained hereunder amplify those contained above.

5.   **Planning and Preparations.** In a passage of lines operation, the incoming force will be organized so that the mission can be carried out after the passage of lines. The force in position should adopt a posture which will facilitate the passage and provide the maximum support.

6.   The plans of the force making the passage forward have priority over those of the in-place unit. The main features of the plan should include the following:

a.   **Selection of routes.** If possible the moving platoon moves through areas not occupied by the in-place platoon or through areas on its flanks. This reduces congestion in the forward areas and avoids drawing enemy fire. Assembly areas are not used in the forward areas.

b. **Attack positions.** These are sited so they can be easily protected by the in-place platoon but not interfere with its fire or movement. The moving platoon does not pause when moving through the in-place company, but moves directly to the line of departure.

c. **Movement.** The moving platoon has priority on the routes to and within the area of responsibility of the in-place company. The movement plan is known by the in-place company and its platoons. Guides, route marking, attack positions and line of departure and traffic control are the responsibility of the inplace company. The moving platoon may assist with these tasks.

d. **Transfer of Command.** The time or conditions when the forward area becomes the responsibility of the moving company commander .must be clearly established by the two commanders. This may be at, or just prior to H hour or when the preliminary supporting fire commences. The higher headquarters commander may also establish this time. This means that patrols or outposts deployed by the in-place company forward of its main * position, come under the command of the moving company until they are relieved or withdrawn.

e. **Tactical Support.** The in-place company may provide direct and indirect fire, operate observation equipment, breach wire and minefields, provide guides and secure the line of departure.

7. **Execution.** The moving force will take advantage of the security provided by the force in position to deploy for the attack. The entire movement from the rear through the in-place force and across the line of departure should be completed as a single fluid movement in order to avoid congestion. Opening and maintaining routes including the crossing of obstacles is an assault pioneer/engineer task.

REARWARD PASSAGE OF LINES

8.   The platoon taking part in a rearward passage of lines may be part of the covering force which has completed its task or it may be conducting a withdrawal. The rearward passage of lines is similar to the forward passage of lines but it presents the following difficulties:

   a.   the desire for speed and lack of sufficient troops make detailed reconnaissance and liaison difficult;

   b.   the moving platoon may have suffered vehicle and personnel casualties; and

   c.   the moving platoon may be in close contact with the enemy.

9.   **Organization.** The force moving rearward should be organized for disengagement. The force in-place will be organized so that it can carry out its mission as soon as it assumes this responsibility. Additionally, it will ensure the smooth passage of lines of the force moving rearward. For this purpose a handover line will be established, which will have some or all of the following characteristics:

   a.   the line should be forward of the feature from which the enemy can first engage the next defensive position with observed fire, and be situated so that crossings and defiles used by the force moving rearward can be protected;

   b.   the line should be in an area which can be defended at least temporarily;

   c.   good lateral routes should exist behind the handover line to allow the use of alternative entry points; and

   d.   the line location should be easily identifiable on the ground.

10.   **Planning.** The planning considerations explained for a relief of troops in combat generally apply to a rearward passage of lines. Furthermore, the sequence should allow for the early passage by

elements not essential to the immediate operation, in order to reduce the density of the force in the position. This implies a thinning out phase by the troops which will be moving rearward.

11. Execution. The main features of the rearward passage are:

a. **Fire Support**. The in-place unit provides all possible fire support for the moving company/combat team. Arrangements for the control of this fire must be made.

b. **Passage through Obstacles**. The in-place sub-unit identifies all routes through obstacles to the liaison teams and provides guides and traffic control for the moving company/combat team/battle group.

c. **Transfer of Command.** Coordination of control measures is arranged so that the in-place unit assumes command at the mutually agreed time or when the moving company/combat team is clear of a mutually agreed handover line.

d. **Traffic Control**. To reduce troop density and congestion, multiple routes are considered. Traffic control is provided by the in-place unit and the moving company/combat team is given priority use of routes.

e. **Rendezvous or Assembly Area.** The use of these areas to collect sub-units should be avoided. However, if they are used, the battle group commander will choose them far enough to the rear of the in-place unit to avoid interfering with its tactical or administrative activities.

12. The platoon commander involved in a rearward passage of lines will be required to:

a. evacuate casualties, non-essential vehicles, equipment and supplies as early as possible (timings will be given in the company commander's orders), so that routes are kept clear for the movement of the main force;

b.   the movement across the handover line, where responsibility changes, must be without interruption; and

c.   it may occur that elements of the rearward moving force are temporarily placed under operational control of the in-place force to deal with a critical situation caused by enemy action.

13.   The maintenance of routes and counter-mobility tasks, including the closure or routes and the destruction of crossing points to impede the enemy remains an engineer task. The infantry platoon may be required to form a bridge demolition guard to this end.

14.   **Command and Control**. The movement control of elements of the moving force will be in accordance with the higher commander's direction and will normally be the responsibility of the in-place force. The actual transfer of responsibility will normally be agreed between the two commanders executing the operation. This can be carried out most effectively if they are collocated. The moving force will normally deploy a liaison officer who will be collocated with the in-place company commander (or platoon commander).

15.   The moving force commander will report when his force has completed the rearward move. The in-place platoon commander will report the completion of the passage of lines by the moving force. It is the in-place company commander who will report the change of responsibility to his commander.

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SECTION 6

THE WITHDRAWAL

GENERAL

1 .   A withdrawal occurs when a force is ordered to disengage from an enemy force. The order to withdraw requires agreement by the superior commander. A commander may decide to effect a withdrawal for any of the following reasons:

   a.   if the objective of the operation cannot be achieved and the force is threatened by defeat, or if the objective is achieved and there is no further requirement to maintain contact;

   b.   to avoid battle in unfavourable tactical conditions;

   c.   to draw the enemy into an unfavourable posture, e.g., to bring him to extend his lines of communications;

   d.   to conform to the movements of adjacent friendly forces;

   e.   to allow the use of the force or parts of the force elsewhere; and

   f.   for combat service support reasons.

2.   The purpose of a withdrawal is to extract a unit or sub-unit from a position which may be in close contact with the enemy, and move it to a new position with a minimum of casualties and interference from the enemy. It is one of the most difficult operations of war as the enemy may have the initiative and air superiority, and the morale of our own troops may be low.

3.   A withdrawal may be conducted deliberately as part of a prearranged plan, or more hastily as the result of a change in the tactical situation. The basic planning considerations and drills remain the same

regardless of the reason for the withdrawal, but the time available for battle procedure and execution will naturally differ.

4.   Whatever the reason for the withdrawal, every opportunity must be taken to harass, exhaust and inflict casualties of the enemy. Offensive operations will compel the enemy to move cautiously and will boost the morale of the withdrawing troops.

BASIC CONSIDERATIONS

5.   **Morale.** Platoon commanders must maintain the morale of their members, who must be told the reason why they are withdrawing and the part they will play in the operation, emphasizing the positive aspects. Strong leadership, especially by the NCOs, will be critical to prevent the operation from turning into a rout.

6.   The provision of adequate combat supplies and the prompt evacuation of casualties, will do much to instill and maintain confidence.

7.   Section and platoon commanders must remain forward with the main body, and they will normally be the last to leave their post.

8.   Every effort must be taken to ensure that the withdrawal is not associated with defeat.

9.   **Surprise.** It may be apparent to the enemy from the tactical situation that a withdrawal is imminent. Every effort must be taken to conceal from him the exact time that it is to occur.

10. To maintain secrecy and to achieve surprise, the platoon will participate in the battalion deception plan which will normally include the following actions:

   a.   continue the normal pattern of activity on the front right up to the time of withdrawal, including patrol activities forward and between companies;

b.   avoid any increase or decrease in radio traffic;

c.   observe strict radio/message security;

d.   ensure that commanders have ample planning time;

e.   conduct all abnormal movement during conditions of reduced visibility; and

f.   plan harassing fire to cover the noise of rearward movement.

11.   Once the platoon commanders receives and transmits the order to withdraw, each section must move quickly and silently to be clear of the position as soon as possible. The pace will depend upon the ground, visibility and enemy action, but should not be so fast as to cause confusion and panic. The forward movement of vehicles to pick up the troops so as to increase the speed of a withdrawal must be balanced against the need for secrecy and security.

12.   **Security.** Enemy interference can occur as a result of penetration, infiltration, envelopment, enemy fire or air attack. Protection will be obtained by maintaining an intact front with normal patrols as long as possible and platoons will have an important role to play in this aspect of the security plan. At the section and platoon level, good battle discipline is an excellent means of maintaining security.

13.   **Simplicity and flexibility.** All plans must not only be simple to understand but simple to carry out. Easily recognizable RV and check points and direct routes to them must be selected. Control will be made easier by early and thorough reconnaissance of routes, RV, and check-points.

14.   **Clean break.** The platoon commander must plan to achieve a clean break with the enemy so as to avoid a running battle. This may be achieved by any or all of the following:

a. conducting a stealthy withdrawal in poor visibility;

b.   conducting a speedy and noisy withdrawal relying on maximum fire power to keep the enemy at bay until the clean break is achieved;

c.   using obstacles to delay the enemy's pursuit; and

d.   gaining surprise.

15.   Offensive action. Occasions may present themselves during the withdrawal to attack the enemy. This could take the form of ambushes, the setting of booby traps, the laying of nuisance minefields. If a clean break is not accomplished, the platoon may be asked to stand and stop the following enemy.

PREPARATION

16.   Orders and Briefing. In the orders and briefing the following points must be included:

a.   full details of withdrawal timings, routes and positions of other troops;

b.   a warning against false rumours; and

c.   a warning against leaving behind anything of value to the enemy such as ammunition, papers, marked maps or stores of any kind.

17.   **Information and timings.** Before the withdrawal the platoon commander must know:

a.   who will order him to withdraw;

b.   the time until which he must deny his position to the enemy;

c.   the time before which there will be no rearward movement, except for reconnaissance parties and normal administrative traffic;

d. the time when he may begin thinning out;

e. the time by which the position must be abandoned;

f. the time by which he must be clear of any line;

g. where he is to withdraw to;

h. the route to the combat team/company check point or RV;

i. the position of troops, in any, through which he is to withdraw; and

j. the withdrawal plans of covering parties, patrols, supporting tanks and troops on the flank.

18.   **Reconnaissance.** The section commander selects the route from each trench to the section check-point and section RV. Each soldier becomes familiar with the route from his trench to these locations. Also, he reconnoitres the route from the section RV to the platoon check-point and platoon RV. Platoon commanders reconnoitre the route from the platoon RV to the company check-point and company RV. The company commander coordinates the platoon RVs and check-points and specify the routes from them to the company check-point and company RV, to prevent platoons from choosing the same routes and areas.

CONTROL MEASURES

19.   **Timings.** The four essential timings are:

a. the time until which the position is to be denied. This means that sufficient troops to repel an enemy attack are kept on the position until that time;

b. the time before which there is to be no rearward movement. This means that, except for reconnaissance parties, this is the earliest time that thinning out may begin;

c.   the time by which the position is to be abandoned (self explanatory); and

d.   the time by which all troops must be behind a specific line. This allows the CO freedom to call for artillery and air support forward of that line.

20.   **Check-points.** A check-point is a convenient point along the route back to the RV where a designated member of the section, and a representative of the weapons detachment for the platoon HQ, count the personnel and confirm that all the members of the group are accounted for. Check-points are designated for each section, platoon and company, as well as for the battalion/battle group. Troops do not stop at the check-point, but are counted through on their way to the RV.

21.   **Rendezvous (RV).** The RV is the place where the troops collect and reorganize before continuing the withdrawal. Normally, the first element to arrive in an RV is tasked with the RV security. The commander re-establishes physical control, checks that his platoon/section is complete and ensures that it commences the next phase of the withdrawal on time and tactically organized to deal with ambushes or attacks from the flank or rear. In his orders, the company commander will state the location of the company check-point and of the company RV, as well as the route to them for each platoon. For simplicity and ease of control the RV is usually located just behind the check-point.

22.   **Embussing Point.** The embussing point is an area to the rear of the RV where marching troops join their vehicles. For a mechanized withdrawal, the troops may join their vehicles immediately behind the defensive position essentially at a platoon RV and then proceed to the company RV. The company check-point would then count section vehicles through.

STAGES OF THE WITHDRAWAL

23.   A withdrawal takes place in four general phases which normally overlap. The stages are:

a.   **Thinning Out**. Thinning out involves the rearward movement of non-essential personnel, equipment, ammunition, defence stores and vehicles before the beginning of the withdrawal. During this stage, reconnaissance parties may deploy to the new position.

b.   **Preparation**. Preparation could include the development of intermediate positions and the reconnaissance of routes, checkpoints and RVs. Depending on the need for security, it could also include the recovery of claymores, trip flares and line and the withdrawal of observation posts and standing patrols.

c.   **Disengagement**. Soldiers in the main defensive position get out of their trenches and start moving back towards their new position.

d.   **Rearguard**. A rifle platoon may be tasked as part of a rearguard to conduct protective or delaying actions to cover the withdrawal of the main body.

CONDUCT OF THE WITHDRAWAL

24.   To make a clean break with the enemy may be difficult if surprise is lost or if the enemy is in close contact with the forward positions. The platoon must continue all its normal activities until the last moment, so as not to give any indication of impending withdrawal.

25.   Withdrawals are conducted by day and night. The sequence of day or night withdrawal is compared in the chart at figure 8-6-1.

SER	WITHDRAWAL BY DAY	WITHDRAWAL BY NIGHT
(a)	(b)	(c)
1	Reconnaissance parties deploy to intermediate or new positions.	Reconnaissance parties deploy to intermediate or new positions.
2	Non-essential elements are thinned out.	Non-essential elements are thinned out.
3	A covering force is established.	A covering force is established.
4	Patrols are withdrawn.	Troops in depth are withdrawn.
5	Forward troops in contact are withdrawn.	Patrols are withdrawn.
6	Troops in depth are withdrawn through the covering force.	Forward troops in contact are withdrawn through the covering force.

Figure 8-6-1 Comparative Chart - Day and Night Withdrawals.

26.   **Withdrawal by night**. When a platoon withdraws from a position at night, the first to leave will usually be the reserve section and the platoon HQ, less the platoon commander, communicator and runner. These troops withdraw to the platoon RV where they wait for the rest of the platoon.

27.   The platoon second in command (if available) or the rear section commander is in command of the, platoon RV until the arrival of the platoon commander. The rear section is responsible for

organizing the RV and also for protection, controlling and directing the remainder of the platoon until the platoon commander arrives.

28.   Protection and control are vital: everyone must be silent. The forward section or sections then withdraw. Normally a section will withdraw complete, the section commander personally going to each fire trench, collecting the members of the section and moving back to the platoon RV.

29.   On occasion, forward platoons and sections may have to extract themselves by fire and movement. On arrival in the platoon RV, section commanders will check their sections and report to the platoon HQ. If casualties are sustained during this part of the withdrawal, improvised stretchers may be required to get them back to the platoon RV and possibly as far back as the company RV. The platoon commander will leave the position with the last section to withdraw.

30.   When all are clear he will rejoin the platoon at the RV and lead it through the company check-point to the company RV. The company check-point is used to maintain control between platoon and company RVs. Platoons will not stop, but will report verbally their identity to whoever is manning the check-point, usually the company sergeant major (CSM).

31.   At the company RV the platoon commander checks his platoon and reports to the company commander. The first platoon to arrive at the company RV will normally be responsible for its protection.

32.   Time spent in RVs must be just sufficient for a rapid check of sections and platoons to be carried out and stragglers collected, before moving on to the next control point. Sections and platoons adopt prearranged positions of all round defence in RVs.

33.   When withdrawing, the speed of movement depends on such factors as ground, visibility and enemy fire. It must be at a good pace but slow enough to avoid confusion and prevent panic. Security is important as well as speed.

34.   **Support Weapons.** Mortar Fire Controllers (MFCs) remain until the forward platoons withdraw.

35.   **Other Arms**. Whether tanks are withdrawn at last light, thinned out early or remain to the last depends on:

   a.   the ground and routes;

   b.   the degree of surprise required (if tanks move early they may prejudice security); and

   c.   the enemy tank threat (tanks can remain until last but must have some infantry protection).

36.   Infantry and tanks withdraw on separate axes. Forward Observation Officers (FOO) leave with the last infantry to give fire support up to the final abandonment.

37.   **Surveillance Equipment.** Surveillance devices will assist forward platoons in detecting and locating enemy follow up movement, but intruder alarms will have to be taken up in good time.

38.   **Non-essential Kit and Equipment.** All non-essential kit and equipment should be backloaded as early as possible.

39.   **Withdrawal by day.** By day, it is extremely difficult to break contact without being seen. A daylight withdrawal is not desirable but it may be unavoidable. Furthermore, modern battlefield illumination techniques and equipment diminish much of the advantage of darkness.

40.   Forward platoons withdraw covered by the reserve platoon. Maximum use must be made of all fire power available from artillery and tanks. If enemy pressure is heavy, forward platoons are to take up intermediate positions to cover the withdrawal of reserve platoons.

41.   The company continues to leapfrog back until a clean break is made. It is essential to avoid a running fight and the enemy must be hit sufficiently hard to prevent him closing in and maintaining contact

with the withdrawing forces. At platoon level, this may mean withdrawing using fire and movement.

42.   **Breaking contact.** Normal activity is maintained until the last possible moment. If the enemy becomes aware of the withdrawal and attacks, forward companies and perhaps the whole battalion may have to disengage using fire and movement.

43.   Commanders are the last to leave a position. They must check their localities prior to leaving, then move rapidly to the RV. They remain in contact with the company HQ and are prepared to react to any enemy interference en route.

44.   **Withdrawal under pressure.** If the forward platoons are in contact, a fighting withdrawal may have to be used to establish the clean break. Within rifle platoons and companies fire, movement and smoke are employed. It will be most difficult to prevent the platoon and company battle from developing into a running fight. The forward sections and, at the company level, the forward platoons must be covered by the depth section/platoon. The same holds true at the battalion level. The use of successive hasty intermediate defensive positions may be required until a clean break is effected.

45.   **The move back.** After concentrating at the RV, the platoon moves rearward through the company check-point to the company RV. On order from the company command post, the platoon then begins its move back as a group, using similar formations as in the advance.

46.   Troops may be detailed for flank and rear protection. Casualties are carried on stretchers as far as the UMS, which is normally at the battalion RV. They should be evacuated out as early as possible so that they are not reinvolved in the battle. Time spent in the RV is as short as possible.

47.   Companies start moving to the rear as soon as possible after arrival. The rear most company is responsible for the rear protection of the column. The schematic organization for a withdrawal is illustrated in Figure 8-6-2.

OCCUPATION OF A NEW POSITION

48.   Before the forward position is abandoned, reconnaissance parties move back to reconnoitre and plan the layout of the new position. The platoon second in command is part of the company reconnaissance party along with at least one member of the platoon who will act as a guide. Ideally there is one guide per section. The new position is spitlocked or taped by reconnaissance part, to make occupation quicker.

MECHANIZED WITHDRAWAL

49.   APCs permit a relatively speedy withdrawal by night or day. In this case, mortars and anti-armour weapons can stay in action and radars operate to the very last minute.

50.   The same basic procedures apply except that because of better communications, control arrangements can be relaxed and checks conducted by radio rather than done physically. Reconnaissance of the first part of withdrawal route is still very important for a night withdrawal.

ADMINISTRATION

51.   Once the withdrawal starts, access to administrative resources is limited and normally only possible if the plan makes provision for specific items. The following points are considered:

   a.   **Replenishment**. This depends on the circumstances. As a guide, a full replenishment is completed before the withdrawal begins. The company A2 echelon remains forward to provide battle replenishment but the platoon does not plan on being replenished until it is in the new location.

   b.   **Casualty Evacuation**. Prompt casualty evacuation in the withdrawal is vital to morale. All ranks need to know that injured personnel are not left behind. Evacuation is complicated during the disengagement phase and casualties

may be carried in vehicles other than ambulances until subunits regain contact with the medical evacuation chain. It is important that all commanders know the evacuation plan including the location of medical facilities.

c.   Repair and Recovery. Company priorities are established to set a deadline for repairs to be completed. Broken down vehicles are backloaded to the Equipment Collecting Point (ECP). Recovery resources are forward by the time the disengagement and withdrawal starts. Once the disengagement commences, orders are issued for the recovery of non operating vehicles, by whatever means possible, as well as orders for the destruction of equipment that must be abandoned.
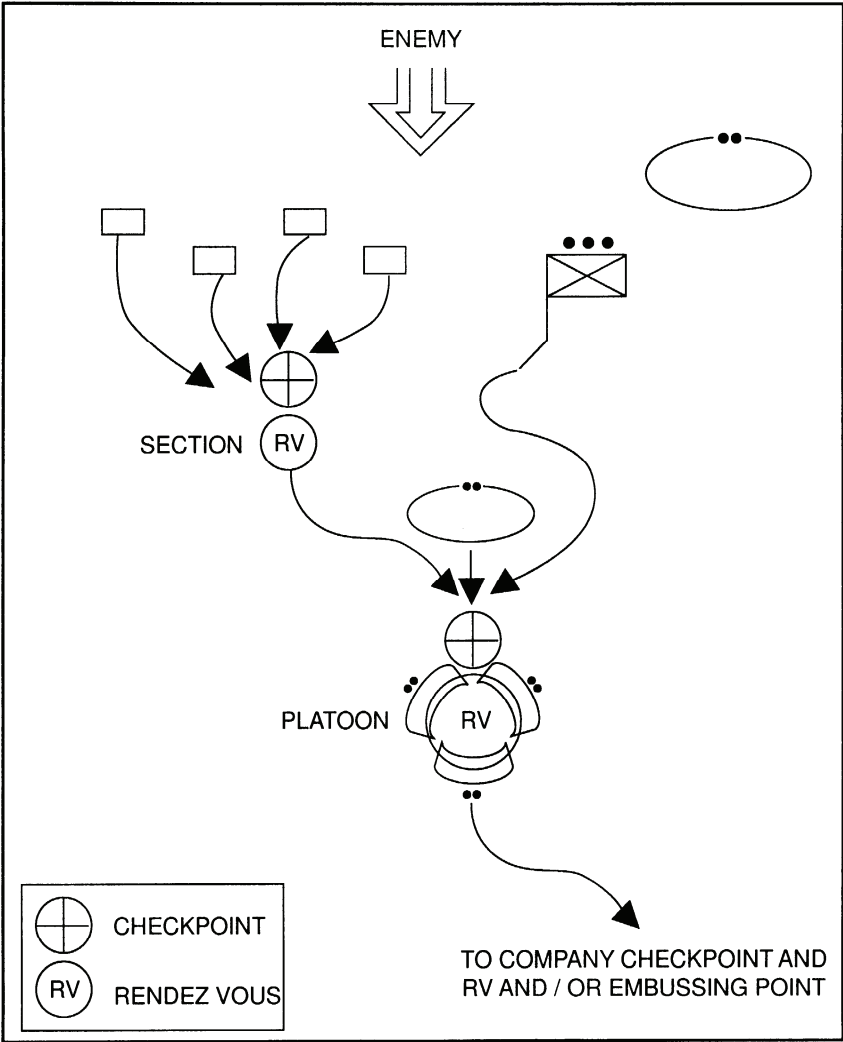
Figure 8-6-2 Control Measures in the Withdrawal

AIDE-MÉMOIRE

RECONNAISSANCE - RELIEF IN PLACE

1.   During his reconnaissance, the platoon commander must endeavour to obtain information on the following points:

a . **Enemy Forces**

(1)   opposing units/formations,

(2)   known location, including tanks and supporting weapons,

(3)   minefields, wire and obstacles,

(4)   known defensive fire areas and fixed lines,

(5)   shelling,

(6)   habits,

(7)   patrol activities,

(8)   observation posts and surveillance devices,

(9)   morale, and

(10)   probable intentions.

b.   **Friendly Forces:**

(1)   general layout of the battalion with special attention granted to flanking platoons or companies;

(2)   detailed dispositions for the platoon, including the number of battle trenches for each section;

(3)   section arcs of fire;

(4)   machine gun fixed lines and arcs of fire, ideally the outgoing units GPMG tripods should be left in position in exchange for the incoming unit's.

(5)   SRAAW arcs of fire;

(6)   likely tasks for the light mortar;

(7)   positions of trip flares;

(8)   position on the terrain of DF tasks and how they are called for;

(9)   range cards;

(10)   maps and air photographs;

(11)   observation posts and details of patrols out;

(12)   wire, obstacles, and minefields, and gaps and lanes through them;

(13)   approaches and dead ground; and

(14)   surveillance plan including location and tasks of radars and Night Observation Device (NOD).

c.   **Service Support:**

(1)   reserve ammunition,

(2)   defence stores, including reserves of wire and mines,

(3)   casualty evacuation,

    (4)   water supply,

    (5)   feeding arrangements including reserve rations, and

    (6)   sanitary arrangements.

d. Command and Signals:

    (1)   track plan and runners' routes,

    (2)   location of neighbouring platoon HQ, company HQ, and battalion HQ,

    (3)   position of line if laid,

    (4)   light signals,

    (5)   inter-trench communication system, and

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CHAPTER 9

THE DELAYING OPERATIONS

SECTION 1

INTRODUCTION

GENERAL

1.   The aim of the delaying operations is to avoid or postpone a pitched battle in order to gain more favourable conditions. Delaying operations are those in which a force under pressure trades space for time by reducing the enemy's momentum and inflicting maximum damage without, in principle, becoming decisively engaged.

2.   The delaying operation is an operation of war which is planned and fought at the battalion level and above, and the infantry platoon participates as part of the combat team. Although delaying operations can be conducted within other types of operations, it is always part of the covering force action forward of the defence area. Delaying operations are covered in B-GL-309-001 /FT-001.

3.   This chapter will explain the basics of delaying tactics, including the demolition guard and tank hunting.

OBJECTIVES

4.   The objective of the delaying operation is to preserve freedom of action for the delaying force until the offense can be resumed. The intent is to offer virtually continuous opposition to force the enemy to deploy, go through his battle procedure and concentrate for an attack. It is conducted to:

a.   harass, exhaust, resist and slow down the enemy by inflicting casualties which reduce his offensive capability;

b.   to determine the enemy's main effort;

c.   to channel the attacker towards a given area or to place him in a position which would lead to his subsequent destruction;

d.   permit the use of force elsewhere, thereby protecting the deployment of forces task elsewhere;

e.   avoid combat under unfavourable conditions;

f.   in the case of flank or rear guards, delaying actions are fought for one or more of the following reasons:

   (1)   to gain time for the main force to react to the new threat;

   (2)   to prevent the enemy from interfering with the main force;

   (3)   to stop the enemy from gaining information concerning the actions of the main force; and

   (4)   to permit the main force to disengage and move away from the enemy during a withdrawal.

g.   reposition forces; and

h.   shorten lines of communication and supply.

CHARACTERISTICS

5.   The delaying operation comprises a combination of defensive and offensive actions. It is continuous fire and movement that forces the enemy to deploy over and over again. Within the formation commander's intent, the battle group usually occupies a series of delaying positions from which it may either break contact behind other delaying positions, or withdraw to its next position in depth.

6.   In order to achieve freedom of action, the delaying operation is characterized by the following actions:

    a.   avoid decisive combat, the delaying force must be preserved for subsequent operations;

    b.   superior use of mobility;

    c.   delay using a series of hasty positions;

    d.   keep maximum fire power forward;

    e.   keep extended frontage;

    f.   conduct long range engagements as the norm; and

    g.   conduct counter-attacks only to disengage elements caught in close contact and not to regain lost ground.

7.   The success of delaying operations depends on:

    a.   **Offensive Action.** Although the general initiative rests with the enemy, the delaying force can create and seize opportunities for offensive action. An enemy force that overreaches itself or exposes a flank is particularly vulnerable. Limited attacks are undertaken when losses or damage can be inflicted on the enemy with reasonable risk. Ambushes serve this principle well.

    b.   **Security and Protection.** Security and protection are essential to avoid surprise and an unwanted decisive engagement. They are achieved not only by using concealment, camouflage, deception, communications security, electronic warfare and counter-intelligence measures: but also, by the protection of crossing sites, particularly bridges, and other critical points along routes or axes.

c.   **Fire and Movement.** Engaging the enemy at long ranges surprises and confuses him and makes him pause and deploy. Such fire imposes caution and causes casualties on the enemy without revealing the disposition of our troops. Combat teams disengage and move to new positions when the enemy concentrates.

d.   **Maintaining a Balanced Effort.** In delaying operations, a balanced force is required to deal with unexpected situations. The Battle Group Commander will endeavour to organize his force to obtain a judicious balance in the number of troops maintaining surveillance, conducting reconnaissance, engaging the enemy, withdrawing to new delaying positions and in reserve.

e.   **Maintaining Contact**. Battle groups maintain contact with the enemy to avoid being surprised, to determine his rate of advance and his direction.

f.   **Effective Use of Terrain**. Battle groups use terrain to force the enemy to conduct time-consuming and costly attacks in order to advance. The terrain selected has natural or easily improved obstacles, that canalize the enemy and slow him down. It offers good observation and fields of fire and allows for easy disengagement.

g.   **Trading Space for Time.** Usually it is the amount of time needed to prepare the defence that determines the delaying period. The area of responsibility of the covering force has to have sufficient depth otherwise the duration of the delay has to be shortened, or there has to be a compensating increase in the strength of the covering force, or the acceptance of high losses.

THE ESTIMATE - IMPORTANT FACTORS

8.   The following factors are considered:

    a.   **Enemy.** He will attempt to bypass strong opposition, then isolate and destroy it with follow up forces. Consequently, the platoon must retain its mobility and guard its exposed flanks and minor approaches using all-around defence.

    b.   **Own Troops**. The platoon does not operate alone except for specific delaying tasks such as ambushes or demolition guards.

    c.   **Terrain**. The defender has the advantage of knowing the terrain. Take maximum benefit of this advantage. The defensive analysis produces the following:

        (1)   likely enemy major and minor avenues of approach;

        (2)   best positions from which to dominate these approaches with observation and fire;

        (3)   covered and concealed withdrawal routes;

        (4)   natural obstacles that may be improved;

        (5)   likely ambush positions; and

        (6)   lateral routes which could be used to move a reserve, and which could also be used by the enemy.

    d.   **Time and Space.** The depth and width of the area affects the manoeuvre plan. More space should provide more time for preparation of positions. The length of the delay to be imposed is a fixed restraint on the defender. He must hold for this minimum time using all the advantages that he possesses.

9.   The delay becomes a series of hasty defences, withdrawals and ambushes. It requires good reconnaissance, battle procedure and effective control at all levels. Strong leadership, good morale and aggressive actions are needed. Local counter-attacks by the reserve section may be necessary to regain a lost section position or to assist a section to extricate itself from close quarter fighting and withdraw to the next position.

FIRE PLANNING

10.   The indirect fire plan is essential for:

    a. continuous fire support to cover the manoeuvre from one delaying position to the next;

    b. defensive fire for each delaying position available at maximum range to force early enemy deployment;

    c. defensive fire on all obstacles; and

    d. covering fire on any gaps and exposed flanks.

11.   The antiarmour fire plan is developed for each delaying position and coordinated into an integrated combat team plan. The key point is the selection of tank killing zones. At the battle group level, the CO will normally retain control over some battalion antiarmour resources to influence the battle.

CONDUCT

12.   The following control and coordination measures are used:

    a. the time until which an area of responsibility must be held;

    b. delaying positions to the rear reconnoitred and partially occupied before the forward position is abandoned;

    c. contact maintained with units operating on the flanks;

d. report lines, bounds, routes, axes and boundaries established throughout the entire area of responsibility, for use as required;

e. withdrawal from a position before the stated time must be approved by the next senior commander;

f. plans and communications based on the most reliable means must cater for this; and

g. commanders well forward to personally influence actions as they develop.

13. The delaying action can be conducted using long range engagements or relatively short range ambush action or, best, a combination of these. All measures must be taken to gain surprise and to throw the enemy off balance.

14. Concealment and good camouflage are vital. If the enemy is able to detect the delaying positions well in advance, he gains the initiative by being able to plan bypass operations or well coordinated hasty attacks.

COMBAT SERVICE SUPPORT

15. In planning the delay operation, the following combat service support requirements must be considered:

a. **Combat supplies.** These should be held forward, preferably on A echelon vehicles rather than dumped. If absolutely necessary some supplies may have to be dumped at future delaying positions. This is especially so for mortar and antiarmour ammunition and mines.

b. **Defence stores**. These are held forward and may be dumped at delaying positions.

c. **Repair and recovery.** Recovery takes precedence over repair unless the tactical situation permits in situ repair. All possible

battalion recovery means must be ready for use. A policy for equipment destruction must be issued.

d.   **Medical.** The battalion may obtain additional attached ambulance resources or helicopter support. Notwithstanding any possible additional resources, the platoon commander must ensure the evacuation of platoon sick and wounded, especially during ambushes, mobile delaying actions and withdrawals.

e.   **Traffic control.** Traffic control is maintained on reserved routes and during the rear passage of lines when the battalion elements return through the main defensive position.

16.   **Echelons.** A1 echelon operates forward, close behind the fighting sub-units. If the battle group is fighting from a series of combat team delay positions, combat team A1 echelons will operate detached. A2 echelon is back in the main defensive area to reduce traffic. Some elements, such as additional recovery, supply and medical elements, normally held at A2 echelon should become part of A1 echelon for the delaying operation.

SECTION 2

DEMOLITIONS GUARDS

INTRODUCTION

1.   Routes must be denied to the advancing enemy. This is accomplished in part by cratering and demolitions. Demolitions are most effective at defiles and river lines, where crossing places are limited.

2.   Demolitions are classified as preliminary and reserved. Preliminary demolitions may be fired as soon as the engineers have prepared them or on the orders of the local tactical commander. A demolition guard is not necessary and the firing is an engineer responsibility.

3.   Reserved demolitions are specifically controlled, either because they are vital part in the tactical plan, or because of the importance to the structure itself. Three commanders are concerned with the firing of a reserved demolition:

    a.   **Authorized Commander**. The authorized commander is the commander authorized to order the firing of the demolition. Initially this will normally be the brigade or division commander, although in the latter stages of the battle, it may be delegated to the battalion/battle group commander.

    b.   **Demolition Guard Commander**. The commander of the demolition guard is normally a company or platoon commander.

    c.   **Demolition Firing Party Commander**. The commander of the demolition firing party is normally an engineer officer or noncommissioned officer.

4.   Reserved demolitions are guarded by a force varying in size from a platoon with support weapons up to an entire battalion, depending on the importance of the site/structure and the enemy

threat. The Demolition Guard Commander commands all troops at the demolition site, including the engineer firing party. He is responsible to the authorized commander for guarding the demolition, and for ensuring that it is fired only when ordered. His duties as well as those of the engineer firing party commander, are detailed on **STANAG Form 2017 DEMOLITION ORDER,** which is issued by the formation commander ordering the reserved demolition.

5.   **Communications**.   The   authorized   commander   provides   direct communications between his HQ and the demolition guard commander. This may be a combination of radio and line communications or by liaison officer (LO).

DEFENCE OF A RESERVED DEMOLITION

6.   **General**. The normal fundamentals of the defence apply to the defence of a reserved demolition. The main consideration must be the close defence of the demolition itself, as opposed to finding the best piece of ground to defend.

7.   **Factors**. In planning the defence, the demolition guard commander should consider the following requirements:

   a.   increased emphasis on all-around defence, to guard against a heli borne attack;

   b.   physical control of the access to the demolition from both sides;

   c.   in the case of a bridge demolition guard, controlling the water approaches through patrolling and the emplacement of wire obstacles;

   d.   arrangements for withdrawing guard elements from the far side of the obstacle, once the demolition has been blown;

   e.   the rapid recovery of vehicles that breakdown on or near the demolition; and

f. traffic, straggler and refugee control.

8. **Command Post (CP).** The CP is on the friendly side of the obstacle, far enough from the demolition to ensure the safety of the troops when it is fired, yet close enough to ensure a clear view of the target.

9. **Firing Point**. The firing point is on the home side. It should be close enough to the CP to provide easy communications between the guard commander and the firing party commander. More importantly, however, it must be close enough to the target to provide easy access and supervision of the demolitions.

10. **Alternate Firing Point.** It is normal to site at least one alternate firing point and CP. The alternate CP may be on either side of the demolition. The alternate firing point is sited on the enemy side. This is done in case of original firing point is captured by coup de main or destroyed by enemy fire.

11. **Post Firing Activities**. Once the demolition is blown, the demolition guard is not withdrawn until the engineer party has inspected the demolition, and improved the effectiveness of it as necessary. It is the guard commander's responsibility to report the effectiveness of the demolition to the authorized commander.

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SECTION 3

AMBUSH, COUNTER-AMBUSH AND TANK HUNTING

AMBUSH AND COUNTER-AMBUSH

1 . An ambush is a surprise attack upon a moving or temporarily halted enemy by a force lying in wait. It is usually a brief encounter and does not require the capture and holding of ground. Ambushes may be sprung in front of and behind the enemy FEBA, against both regular and insurgent forces. A series of successful ambushes will make the enemy apprehensive and cautious in his movements.

2. The ambush can be of section, platoon and company size. It is a tactic which will be used in all operations of war but will be most often employed as an offensive tactic in the defence, the delaying operation, in transitional stages of operations, and when fighting in specific environments, such as in forests, mountains and jungles.

3. A comprehensive guide on the ambush and counter-ambush is contained in B-GL-318-010/FT-001. The subject is therefore not further discussed in this publication.

TANK HUNTING

4. Tank hunting is not covered in one particular manual. This section considers tank hunting based principally on two manuals, B-G L-318-010/FT-001, and B-G L-309-004/PT-001.

5. Tank hunting teams are deployed to destroy tanks in close terrain such as defiles, gaps, densely wooded or forested areas and when fighting in built-up areas. They may use SRAAW, mines and unconventional devices such as molotov cocktails, and make expedient use of obstacles to accomplish their aim.

6. The decision to deploy tank hunting teams is made at battle group/battalion level and above. They are not an end in themselves, but should support the main battle.

7.   The timely destruction of one tank in close country can force accompanying infantry to dismount and cause the deployment of engineers to clear a lane.

8.   Carefully deployed tank hunting teams thus have the capability of reducing the rate of advance of a mechanized formation to that of infantry. The SRAAW(M) and SRAAW(H) permits the tank hunting team to defeat the most modern tanks by frontal engagement. SRAAW(M) should be used more for side and rear shots.

9.   The tank hunting team does not hold terrain; it can however, to some extent, control it by denying enemy AFVs the use of routes through close terrain.

10.   Tank hunting teams are vulnerable to infantry, but by using hit and run tactics they can cause the enemy infantry to search for them. They are effective in the delaying battle and in close country and builtup areas.

11.   The tank hunting team is based on the infantry section. The section APC provides the team(s) with mobility, anti-APC and antipersonnel fire support, and a means of transporting weapons, ammunition, rations and stores. However, the use of the APC for tank hunting depends on the mission, the terrain and the enemy situation. The APC cannon or machine gun is for self-protection, and the APC is transportation for the team. It must not be used as a fighting vehicle.

12.   **Fundamental Considerations.** The platoon commander will endeavour to respect the following considerations:

a.   **Surprise.** Surprise can be achieved by:

(1)   careful planning based on current and reliable information,

(2)   detailed preparation, including rehearsals, and

(3)   good knowledge of tactics and techniques of enemy tanks and AFVs.

NOTE

The platoon commander must request all pertinent patrol reports, maps, air photographs, and the controlling headquarters must ensure that all new information pertinent to the task is passed on in a timely manner.

b. **Coordinated Fire Plan.** Weapons, which may include mines and demolitions, must be sited to achieve:

   (1)   temporary isolation of the killing zone;

   (2)   restriction in crew vision by forcing tanks to close down;

   (3)   separation of tanks and supporting infantry;

   (4)   surprise delivery of accurate fire against the tank; and

   (5)   protection and concealment from being sited in defiladed positions.

c. **Control.** Effective control is essential for any tank hunting team and must include:

   (1)   early warning of the approach of a target or the location of a target;

   (2)   positive identification of the target as enemy;

   (3)   fire control until the target is in the killing zone;

   (4)   opening fire at the correct time;

   (5)   immediate action drill if enemy is unsuitable to engage, or if the team has been detected;

   (6)   a simple plan of withdrawal from the ambush position; and

(7) radio communications.

13.   Factors considered in the estimate are:

a.   **Terrain.** Close country and cover will reduce the effectiveness of the tank's main armament and limit its mobility. However, the enemy will also protect his armour and the team must consider the action of dismounted infantry.

b.   **Weather and Reduced Visibility.** These will favour the tank hunting team. However, enemy radar and image intensification devices will reduce the advantage of reduced visibility periods and the team must make maximum use of cover, concealment and camouflage. If flares are used, they should be positioned to silhouette the target, preferably at 12 o'clock from the firers. A careful calculation of the probable wind drift is necessary to avoid the team being illuminated by its own flares.

c.   **Tank Limitations.** The team must take advantage of tank limitations.

14.   With the platoon headquarters acting like a mobile patrol, a maximum number of tank hunting team could be employed and controlled.

15.   The tank hunting team are armed with either the 84mm RCL (Carl Gustav), the ERYX or both and the SRAAW(L). These weapons have the following characteristics:

a.   SRAAW(H). The ERYX is a man portable guided weapon capable of defeating known tanks frontally up to 600 m.

b.   SRAAW(M). The 84mm RCL can defeat known tanks from the side, top or rear up to 600 m.

c.   SRAAW(L). This system is carried and fired like a rifle. It has a range up to 300 m and can defeat light tanks/APCs and disable known tanks hit on the side, top or rear.

16.   Tank hunting teams may carry the following equipment (depending on transportation):

   a. one 84mm RCL/SRAAW(M) and one SRAAW(L),

   b. radio,

   c. night vision goggles,

   d. explosive changes/grenades,

   e. antitank mines,

   f. incendiary charges/grenades,

   g. smoke grenades,

   h. first aid kit.

17.   Tank hunting teams can be deployed by foot, helicopter, parachute, vehicle.

18.   Teams operating on foot are vulnerable and should be deployed in rough terrain, dense forests, built-up areas where the environment offers protection in the form of:

   a.   concealment from observation and fire;

   b.   few approaches for tanks; and

   c.   type of terrain which offers good flank firing positions.

VULNERABLE POINTS

19.   The tank has four weaknesses that the team can take advantage of:

    a.   **Main armament and machine gun.** Most tank guns are mounted on the turret and there is dead ground to these weapons because of a depression and elevation limitation. Rough terrain and buildings complicate further the operation of the tank main armament and machine gun.

    b.   **Mobility.** Tank suspension and tracks are vulnerable to antitank mines. While the tank may not be destroyed it could be immobilized.

    c.   **Armour.** The turret, which is the most exposed, also has good armour protection which can be improved by adding reactive armour. Episcopes and periscopes can be penetrated by antiarmour weapons. Other vulnerable parts of the tank are the floor, which can be attacked by antitank mines, and the engine compartment attacked from the side or rear.

    d.   **Crew**. The visibility of the crew is restricted even under good conditions. When the crew is forced to close the turret and when smoke and debris obscure the optical instruments, tank hunting teams close in on the tank.

20.   **Tactics.** Tank hunting is organized into the following steps:

    a.   detect at long range;

    b.   identify;

    c.   isolate tank with indirect fire smoke and HE, hence forcing him to close down;

    d.   separate the enemy infantry from their tanks:

      (1) use indirect fire, mortar and artillery, and

      (2) ambush tanks that are leading their protective infantry;

    e.   neutralize the tank with machine gun, mortar and artillery fire while attempting to destroy the tank's optical instruments;

    f.   blind the tanks using:

      (1) smoke screen (artillery),

      (2) smoke grenades,

      (3) improvised incendiaries (molotov cocktail), and

      (4) white light (at night).

    g.   destroy by approaching to within 300 m of the tank using antitank weapons and explosives.

21.   The section is the smallest group that can effectively ambush a tank. Choice of ground is important, close country is best. The best tactic is to immobilize the first and the last tank in a column. Fire position are based on:

    a.   likely enemy approach,

    b.   natural corridors, and

    c.   surrounding natural obstacles e.g., woods.

22.   For the results of the ambush to be completely successful, following steps are necessary:

a. detect early and identify;

b. block and destroy; and

c. disengage and redeploy.

23.   Control of fire is important in tank hunting. The following criteria are used:

a. selection of tank, first tank is most dangerous;

b. type of fire, single shot, double or salvos;

c. when to open fire; and

d. cease fire.

24.   The tank hunting team is usually supported by artillery and mortars. Direct fire is used to:

a. separate infantry from tanks;

b. force tanks to close its turret cover and other parts;

c. reduce tank visibility; and

d. destroy tanks guided munitions weapons.

25. Tank hunting teams moving with an infantry company can rely on support from that company if they conform to the manoeuvres of the company as follows:

a. mutually supported mission,

b. travel same terrain,

c. mutually supported operations,

d. similar methods of manoeuvre,

e. maintenance of same routine, resupply, etc, and

f. share resources e.g., helicopters.

26. Because of their flexibility, tank hunting teams can be dispatched on short notice to tasks such as supporting an obstacle plan.

27. The team must be knowledgable and trained in obstacle construction and be familiar with various antitank/personnel mines. Important training points are:

a. improving natural obstacles quickly;

b. concealing the obstacles from the enemy;

c. locating obstacles where tanks can be covered by observation and fire; and

d. locating obstacles difficult to bypass.

28. The following obstacles should be used:

a. steep ditches, more than 60°;

b. escarpments more than 1.5 m high;

c. ravines and trenches wider than 5 m;

d. rivers, streams and canals 150 m wide and at least 1.5 m deep;

 e. lakes, marshes and ponds; and

 f. deep snow (more than 1 m deep).

29. Before deploying tank hunting teams the commander should consider the following points:

 a. level of combat activity,

 b. withdrawal routes open,

 c. effectiveness of tank hunting operation because of terrain and visibility limitations,

 d. indirect fire support available,

 e. other economy of force activities in the area, and

 f. relative vulnerability of the team.

30. **Operation of War.** Here are the main tasks of a tank hunting team:

 a. **Attack.** In rugged terrain and reduced visibility, teams are most effective if the pursuit follows the attack when the teams can also be employed to advantage:

  (1) protection of flanks;

  (2) tank killing during the fighting through the objective;

  (3) control of possible counter-attack approaches and in the pursuit; and

  (4) hunt in the rear area of the enemy.

b.   **Defence.** The main tasks of tank hunting teams in the defence are:

(1) guarding tank approaches;

(2) flank protection;

(3) ambushes;

(4) controlling secondary approaches;

(5) mobile covering fire for obstacles;

(6) reserve.

c.   **Delaying Operation.** Tank hunting tasks are:

(1) flank and rear area protection; and

(2) ambushes.

TRANSITIONAL STAGE

31.   **Advance to contact.**

a. Tank hunting tasks are:

(1) attacking the rear area of the enemy; and

(2) flank protection.

b.   **Withdrawal**. Tank hunting tasks are:

    (1)   assist in masking rearward movement by occupying positions that have been evacuated;

    (2)   ambushes; and

    (3)   flank protection.

CHAPTER 10

PROTECTION

SECTION 1

GENERAL

SURPRISE

1 .   **Anticipation.** Commanders must always be alert to the threat of surprise attack. Anticipation and preparedness will reduce casualties to a minimum. In particular, they must ensure that their personnel:

   a.   remain alert;

   b.   know what to do in various circumstances; and

   c.   know why they are doing it.

2.   **Discipline.** Precautions must be continuous. Protection is very largely a matter of discipline with every man being constantly alert and inquisitive. Commanders must always set the example.

3.   **Preparedness.** When enemy contact is possible, troops carry their weapons and never move alone. When engaged in tasks which prevent them carrying arms (such as digging), troops keep their weapons within reach and a sentry or sentries is always be posted. Equipment, if not worn, is placed nearby, assembled for immediate use. If there is a threat of a chemical attack, protective clothing and equipment is worn and the respirator carried.

ELECTRONIC EMISSIONS

4.   When using the radio the following procedures should be used to maintain security:

    a.   minimize radio communications;

    b.   use minimum power when transmitting;

    c.   use minimum antenna;

    d.   site the radio that its emissions are screened from enemy;

    e.   think out the message before transmitting it, and be brief;

    f.   use only official voice procedure;

    g.   use only authorized codes;

    h.   encode sensitive information;

    i.   never mention personalities, units or troop locations in clear; and

    j.   avoid individual operator idiosyncrasies.

SECTION 2

PROTECTION AT REST

SENTRIES

1.   **Alarm Posts.** Whenever troops are halted for any length of time or when in a rest area, they must be allotted positions to be occupied in the event of an alarm. These positions are termed alarm posts and should be sited to meet a ground attack from any direction and give concealment from air observation. Everyone must know where his alarm post is situated by day and by night, and practice alarms must be carried out regularly. If a wait of more than 30 minutes is envisaged, the commander must decide if shell scrapes are to be dug.

2.   **Sentries**. Sentries must always be posted for the local protection of any body of troops. They are responsible for checking the identity of visitors or suspicious persons in the vicinity. The security of the position depends on the alertness and efficiency of the sentries. They must be able to alert the section silently by day and night and must avoid unnecessary movement. They should be concealed and in a position from which they can observe and fire effectively.

3.   The number of sentry positions occupied must be sufficient to ensure security of the locality. Sentries will be posted to give all round protection. Particular attention must be paid to likely approaches. This requirement will vary according to the proximity of enemy positions, enemy activity, and visibility.

4.   **Sentry Orders.** Orders for sentries must be carefully thought out so that nothing is omitted, left to chance or liable to misunderstanding. Orders must be given clearly. A section commander will normally brief his whole section at one time.

5.   Sentry orders must include:

   a.   likely direction of enemy's approach,

   b.   arcs of responsibility,

   c.   extent of fire lanes,

   d.   name of landmarks and reference points,

   e.   position of:

      (1) friendly forces/patrols and when they are due in,

      (2) other sentries,

      (3) own gun positions,

      (4) flank weapons type and distance,

      (5) early warning devices, and

      (6) flares, mines and booby traps,

   f.   concealment and camouflage requirements,

   g.   open fire policy,

   h.   state of weapon readiness,

   i.   challenging procedure,

   j.   password,

   k.   route to and from sentry position,

   l.   location of immediate superior,

m.   timing for tour of duty,

n.   system of relief,

o.   system to warn commander by a means to be specified,

p.   action on:

  (1) contact with the enemy by the sentry,

  (2) contact elsewhere on platoon or company perimeter, and

  (3) shelling of position, and

q.   details of special duties, such as air sentry and NBC sentry.

6.   **Challenging.** The standard procedure for challenging is described in chapter 7. The section commander is alerted if any unexpected person or group approaches the position and, if the situation warrants it, he will stand the section to and alert the platoon commander.

7.   The challenge is given quietly at a range that enables the section to kill any enemy who tries to run away, but not so close that the enemy could rush the post. If the order to halt is not obeyed, it is repeated and if still not obeyed, the order to fire is given. The whole section remains covered and dispersed.

8.   **Sentry Duty.** Duration may be as short as is operationally expedient. A shorter duty may be used when a platoon is working in extreme climatic conditions. A longer period is normal in completed positions to allow a worthwhile rest. When platoon sentries are provided by sections in turn, sections should not change responsibility too frequently or there may be confusion over reliefs. When the section responsibility does change, the relief is supervised by the platoon commander or platoon second in command.

9.   Sentries in a Defensive Position. The number of sentries required by a platoon occupying or preparing a defensive position is given below. The chemical sentry must wear the C4 mask during his duty.

   a. Before Contact:

   (1)   **By Day**. Normally one ground and one air sentry for the platoon subject to local conditions and weather. The chemical sentry's tasks may be conducted by the ground sentry.

   (2)   **By Night**. Two ground and one chemical sentry for the platoon. The tasks of air sentry might not be appropriate at night. Reliefs of ground sentries at night will be staggered to ensure that one is always fresher than the other. This method also ensures that the sight of at least one sentry is always well converted to night vision and night conditions, e.g., calls of animals, shape of trees and bushes, which can cause alarm to a new sentry.

   b. In Contact:

   (1)   **By Day**. One ground/chemical sentry for each section and one air sentry for the platoon; and

   (2)   **By Night.** Two ground/chemical sentries for each section and one air sentry for the platoon.

10.   **Night Sentry Roster.** The night sentry's duty should not exceed two hours. This may require each soldier in the section to do two tours of duty during the night.

11.   The sentry roster is prepared under the supervision of the section commander and notified to every soldier. The roster should change every night to ensure all soldiers, over a period of time, receive equal numbers of early, late and middle of shift tours of duty. Individual's characteristics should also be taken into consideration as

some individuals find it nearly impossible to remain awake and alert during the early hours of the morning while others find it relatively easy.

12.   There are two methods of organizing sentry duty by night.

   a. **Method One.**

      (1) Normal staggering of sentries, supervised and posted by section commander or second in command; and

      (2) Section commander or second in command are on call alternately, the duty NCO sleeping in the sentry trench.

   b. **Method Two.**

      (1) The section second in command sleeps in the sentry trench, and is available immediately in emergency;

      (2) Sentries post themselves as follows:

         (a) the finishing sentry awakes the section second in command then awakes the relieving sentry and escorts him back to the sentry trench; and

         (b) the finishing sentry reports to the section second in command and returns to his own trench.

13.   **Alarm Scheme.** If the alarm signal is given (ideally silent), or if firing begins, every soldier should go to his alarm position. Thereafter, there must be no further movement until stand down is ordered. This means that anyone moving during the period of the alarm is likely to be enemy. There must be no firing at night until the enemy is a certain target. The enemy may be trying to locate positions by deliberately causing the alarm to be raised.

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SECTION 3

PROTECTION ON THE MOVE

COUNTER-AMBUSH

1.   **General**. Platoons on the move must be alert and ready to react instantly to enemy action. Discipline and foresight prevent unnecessary casualties.

2.   Any troops moving outside a secure area must be prepared to counter enemy ambush tactics. The obvious measure is to avoid being ambushed. This may be done by denying the enemy foreknowledge of our movements or by detecting the ambush.

3.   Avoidance. To avoid ambushes, commanders must:

    a.   minimize routine movement;

    b.   avoid roads and tracks;

    c.   maintain security of impending operations and movement;

    d.   use deception; and

    e.   study maps, air photographs and patrol reports to find likely ambush sites.

4.   Anticipation. When moving in areas where ambushes are likely, the following points are important:

    a.   commanders and signaller must not be conspicuous;

    b.   maximum dispersion commensurate with control must be practised;

c. preplanned RVs must be known to all ranks. Two suggestions for RVs are:

    (1) a set distance from the rear of the column and back along the direction of approach; and

    (2) the location of the last halt.

d. scouts should be used and flank protection provided.

5.   **Counter-Ambush Essentials.** There are two essentials which are common to all counter-ambush actions:

a. immediate offensive action, and

b. control by commanders.

6.   Success of counter-ambush drills depends on:

a. practice,

b. aggression,

c. speed,

d. discipline, and

e. common sense.

7.   **Daylight Drill**. In close country with restricted enemy fields of fire an immediate assault into the ambush may neutralize it, and possibly result in the seizure of ground on which a reasonable defensive perimeter can be established. This may provide a foothold for further offensive action. The only orders needed are: **FOLLOW ME** or **CHARGE** or some other simple words are used to achieve an immediate reaction.

8.   **Night Drill.** If a section is ambushed at night:

    a.   move out of the killing zone at once. This is especially important if the area has been illuminated;

    b.   fight through the ambush to the preplanned RV;

    c.   keep control. If lost it must be regained as soon as possible; and

    d.   there can be no question of a flanking or encircling attack at night because of the difficulty of keeping direction and the degree of confusion that will exist in the ambush area.

COUNTER-AMBUSH IN VEHICLES

9.   **Vehicle Preparation.** Soft skinned vehicles may require special preparation, particularly if there is a threat of mines. Preparation might include the following:

    a.   sandbagging the floor of the vehicle;

    b.   removing glass and doors;

    c.   mine plating;

    d.   removing the canopy and bars;

    e.   using ballistic blankets; and

    f.   fixing wire mesh over windows and the rear of the vehicle.

10.   **Command and Control**. The convoy commander is behind the lead vehicles) from where he can see and command his troops. There is one ground and one air sentry per vehicle. The ground sentry has high explosive and smoke grenades. Whenever possible passengers should sit back to back in the centre of the vehicle with weapons easily accessible.

11.   **Action on Contact.** The following action should be taken on contact:

    a.   ambushed vehicles carry out the immediate action drill;

    b.   rear packets will be stopped from entering the ambush;

    c.   the nearest ground commander will put in an immediate attack; and

    d.   artillery or air support may be requested once the target is identified.

12.   To ensure quick and accurate support, the exact location at the moment of ambush must be known. The route must therefore be followed in detail by the packet commander to enable accurate information on his own and the enemy's location to be passed to the controlling HQ.

13.   **Immediate Action Drills (IA Drills)**. The immediate action drill for a vehicle is:

    a.   the sentry returns fire immediately, using maximum fire, explosives (such as claymore mines and grenades) and smoke;

    b.   the vehicle commander makes a rapid decision whether to drive out or fight;

    c.   if it is to fight, then he must order **DISMOUNT** and put in an attack; and

    d.   as soon as he has time the vehicle commander must send a contact report.

14.   Dismounting Drill. Dismounting drill for troops in the vehicle is:

   a.   the vehicle commander shouts DISMOUNT LEFT (or RIGHT) to indicate which side of the vehicle to muster;

   b.   sentries open fire on the enemy and throw smoke grenades;

   c.   sentries debus when troops are clear; and

   d.   all prepare to conduct a quick attack.

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SECTION 4

PROTECTION FROM AIR ATTACK

PROTECTIVE MEASURES

1.   **Introduction**. Protection can be gained from:

   a.   concealment;

   b.   dispersion;

   c.   self-protection;

   d.   early warning; and

   e.   prompt counter-air action when attacked.

2.   **Concealment**. The best protection is concealment. Even the sighting of a few troops can lead to the disclosure of a whole unit otherwise well concealed.

3.   **Moving**. Observe the following rules when moving in the open:

   a.   on a road or track when tactical deployment is not essential, sections should move dispersed in single file on one side, or in loose file;

   b.   where practicable open fields should be skirted. Sections should move in single file along hedgerows rather than in the open. In wet or frosty conditions a few men moving across a field leave a plainly visible track which will reveal the route they have taken;

   c.   if movement has to take place across open ground, sections should move in an irregular formation, well dispersed; and

d. in areas of soft sand, in the desert or on beaches, movement should be along outcrops, or harder sand or rock, or on the water's edge.

4. **Stationary.** When at rest or establishing a defensive position out of contact with the enemy, observe the following points:

a. During temporary halts, rest dispersed under cover with vehicles camouflaged. If there is no cover, troops are well dispersed in the prone position and not looking up when aircraft are overhead.

b. Track discipline is maintained when a post is occupied in the open. Rules for track discipline in the open are:

(1) make full use of existing tracks;

(2) do not cut corners;

(3) keep new tracks to an absolute minimum;

(4) new tracks must blend into the background pattern, following hedges, areas of stone or rock, gullies and stream beds, under trees and along the edge of grassland and scrub; and

(5) new tracks which cannot be fitted into the ground pattern must not stop at the position to which they lead, but be extended further to deceive the enemy.

c. Any spoil from trenches and latrines must be camouflaged or hidden under overhead cover. If necessary, it should be taken from the trenches and carried to the nearest cover as they are dug. Any spoil used for parapets or overhead cover on the trenches must be camouflaged, as must the bottom of an open trench.

d. Fire trenches should, if possible, be sited under cover or along some break in the pattern on the ground, that is, at the edge of a cultivated area or an area of low scrub or long grass. It may be difficult at times to find positions which also fulfil the primary requirements of a fire trench, but some compromise usually is possible. It is almost impossible to conceal a trench which is out in the open, away from any break in the ground pattern.

e. Fire trenches and shelters must be progressively camouflaged as they are constructed. The concealment of spoil is a continuous process. At no time should work cease until all camouflage is complete.

f. Work on a defensive position during the hours of daylight will depend on the air situation and the degree of enemy observation. Under adverse air conditions it may only be possible at night.

g. Shiny or light objects which will attract attention from the air must not be left lying about. Mirrors, food containers, contrasting colour clothing/items must be hidden. Troops should not be allowed to remove their shirts unless there is no air, nuclear or chemical threat.

h. Fires must not be lit where there is any possibility of the smoke or flame being apparent to air observation.

i. APC or vehicle engines that are warm should be shielded from above, preferably with a solid object such as an old door and not foliage, to defeat infrared detectors. Ideally they should be hidden in or among buildings where there is a more favourable infra-red background.

5.   **Cover**. During halts lasting two hours or more, or when enemy air attack is expected, troops will dig shell scrapes. This should be the first task undertaken upon arriving in any area. When enemy air activity is intense and men may have to sleep in their trenches, a minimum of 0.5 m of overhead cover will be necessary.

6.   **Dispersion**. Dispersion is a most important requirement and is probably one of the most difficult measures to enforce even with well trained troops. In open country, or anywhere where it does not prejudice control on the move or at rest, troops within the section must keep dispersed to:

    a.   assist concealment;

    b.   avoid presenting a worthwhile target; and

    c.   reduce casualties if the section is attacked from the air, shelled or mortared.

7.   Commanders must appreciate that, when within enemy artillery or mortar range or under an air threat, it is their responsibility to ensure dispersion of those under their commander. Control must continue to be maintained throughout. Radio, whistle, and hand signals can all assist in this control. Concentrations for meals, rations, water, etc., must be carefully considered in the light of the threat. Only one rocket, shell or mortar bomb in or near a congested group can cause casualties out of all proportion to the expenditure of ammo.

8.   Vehicle commanders must ensure that their drivers maintain the ordered interval. This will be about 100 m if air attack is likely. An air sentry must be posted in each vehicle. In open areas, vehicles should be dispersed even wider. This applies to APCs moving cross country as well as soft skinned vehicles on roads.

9.   **Weapon Control Orders.** Weapon control orders for unit air defence are:

a. **WEAPONS HOLD.** Do not open fire at an aircraft except in self defence;

b. **WEAPONS TIGHT.** An aircraft can be engaged only if it is positively identified as hostile; and

c. **WEAPONS FREE.** An aircraft can be engaged if it is not identified as friendly.

10.   **Early Warning.** Sentries should have air watch included in their duties, and alertness for enemy aircraft is required as part of a normal observation. Sentries will not always have a good view of the air around them, in which case a special air sentry must be detailed. As NBC sentries have a similar requirement, the two tasks may be undertaken by the same person.

11.   The speed of low flying aircraft makes them difficult to identify. Troops must be trained and become proficient in quick aircraft recognition. Hostile low flying aircraft may appear suddenly from behind low hills, belts of trees, and through haze. They will try to attack with the sun behind them.

12.   **Rules for Aircraft Engagement.** Troops should know that:

a. Although anti-aircraft fire from small arms may show no obvious effect immediately, it may cause damage which will either cause the plane to crash on landing or make lengthy repairs necessary.

b. It is usually very difficult for aircrew to determine the exact source of small arms fire directed against them.

c. The use of tracer, when fired from a flank, may help to put an attacking pilot off his aim.

13. Given the high speed of aircrafts, it is essential that fire be delivered quickly and with reasonable accuracy. Small arms fire collectively controlled is an effective deterrent against low flying aircraft.

    a. Aircraft over 600 m are not to be engaged. As a rough guide to estimating height, not much more than a silhouette is visible above 600 m whereas details are visible below 600 m.

    b. Enemy aircrafts are engaged in accordance with the Weapons Control Orders in force (WEAPONS HOLD, WEAPONS TIGHT, WEAPONS FREE.)

14. The action to be taken on the commander **AIRCRAFT ACTION** order is contained in individual weapon manuals.

AIR SENTRY PROCEDURES

15. **Duties and Equipment.** The air sentry's responsibility is to detect enemy aircraft. The air sentry should be located within the section position at a point from which he can best observe his arc of responsibility. Air sentries should be changed frequently because of excessive eye fatigue. The arc of responsibility should be no more than 2100 mils and should interlock to give all round observation.

16. Air sentries should be equipped with binoculars and be trained in aircraft recognition, search and scan techniques, and aircraft target indication.

17. **Search and Scan Techniques.** Scanning is a step by step method of visually searching the ground and sky, and the observer must focus on distinct objects, clouds or terrain features every few seconds. If this is not done, the eyes will relax without the observer being aware of it and distant aircraft will not be detected.

18. There are two scanning procedures. Their use is dependant on the terrain over which the air sentry is observing. The use of these procedures will ensure that the entire airspace within the search arc has been scanned. Rapid scanning over a large arc will detect very little

detail. If the search arc is divided into segments, each of which is scanned in short steps, aircraft are more likely to be detected. The sentry should ensure that he refocuses continually.
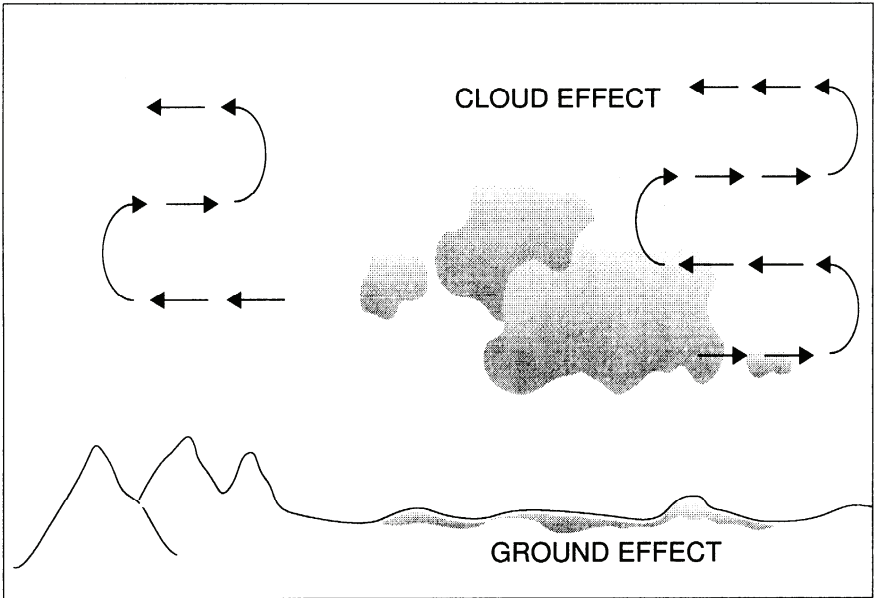
Figure 10-4-1 Scanning Over Flat Terrain

19.   Search and scan procedure for observation over flat terrain is shown in Figure 10-4-1 . Search and scan procedure for observation over hilly terrain is shown in Figure 10-4-2.
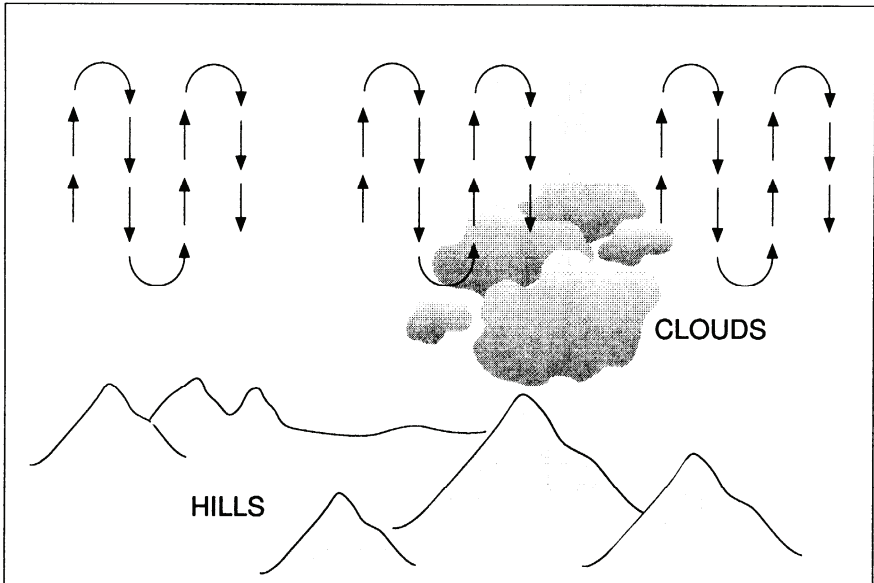
Figure 10-4-2 Scanning Over Hilly Terrain

20.   **Aircraft Target Indication.** Having detected the target, the air sentry must indicate its location to other personnel. Normal methods of target indication are used, e.g.:

  a.   **Reference Point.** "AIRCRAFT, REFERENCE CHURCH, 1 /2 RIGHT, HIGH"; or

  b.   **Axis of Advance.** "AIRCRAFT, RIGHT FRONT, LOW".

21 .   **HIGH** or **LOW** is used to indicate whether the aircraft is above or below 400 mils angle of sight. This will assist personnel in locating the aircraft by reducing the area of sky they need to scan.

ACTION BY VEHICLE CONVOYS UNDER AIR ATTACK

22.   **Alternatives**. There are three alternative actions which may be taken when an air alert is received, or an aircraft is seen by an air sentry. They are to:

    a. stop; or

    b. continue; or

    c. disperse.

23.   **Stop**. Vehicles move to predetermined alternate sides of the road, halt on the shoulder, troops dismount, disperse and provide defensive fire.

24.   **Continue**. The convoy continues on the road, increasing speed as much as possible while avoiding bunching. Antiaircraft fire is provided as much as possible.

25.   **Disperse and Seek Concealment**. Drivers should be trained to continuously look for concealment and protected positions well off the road to allow quick and positive reaction in the event of an air raid warning or air attack.

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SECTION 5

NUCLEAR, BIOLOGICAL AND CHEMICAL DEFENCE

1 .   **References.** More detail can be found in B-GS-316-013/FP-001, and B-GS-316-014,FP-001 .

NBC EMERGENCY ALARMS AND WARNING SIGNALS

2.   The use of vocal alarm signals (spoken word) is the most effective means of informing troops or passing the word of a NBC emergency.

3.   Subject to tactical and observation conditions, visual alarm signals are included to supplement the audio signals.

4.   **NATO Alarms and Warning Signals.** The following are emergency AUDIBLE alarms and VISUAL warning signals used by NATO and American, British, Canadian and Australian (ABCA) forces.

SER	TYPE OF HAZARD	VISUAL WARNING SIGNALS	AUDIBLE ALARMS SIGNALS
(a)	(b)	(c)	(d)
1	AIR ATTACK (Imminent)	RED (Square in shape)	1 . Vocal **"AIR ATTACK"** repeated. 2. Succession of long blasts on vehicle horns, whistles, bugles or other wind instruments in a ratio of 3:1, i.e., three seconds ON and one second OFF. 3. Unbroken warbling siren for one minute.
2	Imminent arrival or presence of **CHEMICAL** or **BIOLOGICAL** agents, or **NUCLEAR** radiation hazard.	1 . BLACK (Triangle in shape). 2. Donning mask and taking protective actions.	1 . Vocal "GAS, GAS, GAS" or "SPRAY, SPRAY, SPRAY." 2. Vocal "FALLOUT, FALLOUT, FALLOUT." 3. Succession of short signals on vehicle or other horns or by beating metal or other objects in a ratio of 1 :1 , i.e., one second ON and one second OFF.
3	ALL CLEAR	Removal of appropriate warning signs.	1 . Vocal "ALL CLEAR" (Specify type of attack). 2. Steady siren note for one minute or sustained blast on a vehicle horn, whistle, bugle or other wind instrument to indicate absence of all NBC and air attack hazards.

Figure 10-5-1 NATO Alarms and Warning Signals

THREAT ORIENTATED PROTECTIVE POSTURE LEVELS

5.   **Application.** The Threat Oriented Protective Posture (TOPP) level of a particular area will be decided by the appropriate commander after considering the local threat, temperature and mission of units concerned.

6.   Within each TOPP level, individual protection can be further reduced if warranted by special conditions:

   a.   personnel inside combat vehicles or facilities with collective protection, citadels; and

   b.   task requirements forcing reduction in heat load.

SER	NBC THREAT	TOPP LEVEL	INDIVIDUAL PROTECTION	COLLECTIVE PROTECTION
(a)	(b)	(c)	(d)	(e)
1	The enemy has an offensive NBC capability but there is no indication of its use in the immediate future.	LOW	Personnel to carry individual protective equipment (IPE) or it must be readily available	Commanders must regularly check collective protective equipment (CPE) for completeness and serviceability.
2	Nuclear weapons or chemical / biological weapons have been used in another area of operations and / or there are strong indications that the enemy will use these weapons in the future.	MEDIUM	Nuclear - TOPP level LOW applies.\n\nChemical / biological – IPE worn less gloves and mask.\n\nObserve **AROUSE**	Test fixed and mobile collective protection systems. Mobile units earmark locations for the installation of portable collective protection shelters, erect if tactical situation permits. If possible, equipment to be kept under cover as protection against liquid contamination or fallout.
3	Nuclear attack or chemical / biological attack imminent.	HIGH	Put fixed and mobile collective protection system into state of readiness (including combat vehicles) and if tactically possible, portable collective protection shelters of mobile units	

Figure 10-5-2 TOPP Levels

NUCLEAR, BIOLOGICAL AND CHEMICAL SENTRIES

7.   **Siting**. Subject to the tactical situation, the sentries should, if possible, be sited:

    a.   with immediate access to communications;

    b.   with immediate access to the local NBC alarm;

    c.   at the upwind edge of the unit area of responsibility;

    d.   with a clear field of observation;

    e.   where detection devices can be used properly; and

    f.   so that frequent rotation can occur without detection.

8.   **Clothing and Equipment.** One sentry will be dressed in TOPP High while the other is in TOPP Medium. In addition to personal protective items, the sentry should carry, or have available as applicable:

    a.   extra booklets of 3-Way Detector Paper;

    b.   compass, watch, map, binoculars and flashlight (as necessary);

    c.   a gamma survey radiac metre (IM 108C/PD) if his duties include the reporting of radiation dose rates;

    d.   Chemical Agent Detector Kit (C2 Kit) if his duties require identifying chemical agents;

    e.   Nerve Agent Vapour Detector (NAVD), if available;

    f.   automatic and remote chemical alarm systems; and

    g.   Chemical Agent Monitor (CAM).

9.   **Duties.** The duties of the NBC sentries are:

   a.   to detect suspected or actual biological or chemical attacks by:

   (1)   observing the occurrence of any event covered by the Biological Chemical Warfare Survival Rule;

   (2)   monitoring detector paper for its reaction to liquid agents;

   (3)   monitoring the alarm of any automatic detector allocated to his position; and

   (4)   noting the means of delivery or dissemination system, if applicable, and the numbers of each involved in the attack.

   b.   to warn his area of responsibility of a suspected or actual attack by:

   (1)   sounding the NBC local alarm;

   (2)   shouting **GAS** repeatedly or shouting **SPRAY** repeatedly whenever there are signs of liquid attack.

   c.   to report, as required by his commander:

   (1)   the reason why he sounded the NBC local alarm;

   the reaction on detector paper, if applicable; and

   (3)   the means of delivery or dissemination, with numbers involved, if possible.

   d. use the detector kit and report the results of the tests.

NUCLEAR DEFENCE

10.   **Warning.** Prior warning of a friendly nuclear strike should be given to all troops; however, this may not always be possible. Advance warning of enemy nuclear attack may not be possible.

11.   **Sentries.** The NBC sentries cannot be used for any other type of sentry duties. The sentries must be rotated regularly to avoid dehydration and heat stress.

12.   **Detection.** The most likely first indication of an enemy nuclear attack is the intense dazzling flash of light. This flash may cause temporary blindness, lasting from a few seconds up to several hours, or even permanent damage to the eyes. The second obvious effect is blast. It takes the form of a severe pressure wave accompanied by very strong winds. Most casualties will be caused by the secondary effects of blast, such as men being hurled to the ground or against solid objects or being struck by flying or falling debris. Intense heat rays will also be emitted for several seconds. Troops will receive moderate to severe burns on exposed flesh.

13.   Protection is achieved by:

    a.   avoiding badly contaminated areas;

    b.   covering exposed parts of the body;

    c.   early cleansing of clothing by brushing;

    d.   avoiding infection through open cuts or wounds;

    e.   avoiding inhalation or ingestion of contaminated dirt; and

    f.   using dosimeters to establish the cumulative dose received by individuals, so they are not exposed to a critical dose.

14. **Immediate Action Drill (Nuclear).** If the individual is forewarned of a nuclear attack he must seek the best shelter possible and take the necessary individual protective actions against the immediate effects of the burst.

15. If there is no forewarning of a nuclear attack the following immediate actions must be carried out on observing a dazzling flash of light.

a. **On Foot:**

(1) Dive for cover or fall on the ground, face down. Do not try to decide the direction in which the explosion has taken place. Move to cover only if it is within diving distance.

(2) Close the eyes; do not look at the fire ball. Shield the face with the arms or gloved hands and keep as low as possible.

(3) After the bang is heard wait until debris has finished falling before opening the eyes or moving.

b. **In Vehicles:**

(1) Stop the vehicle, do not dismount.

(2) Close the eyes and shield the face with the arms or gloved hands and keep as low as possible.

(3) After the bang is heard wait until the debris has finished falling before opening the eyes.

c. **In Field Shelters:**

(1) Dive for cover, close the eyes and shield the face with the arms or gloved hands, and keep as low as possible.

(2) After the bang is heard, wait until debris has finished falling before opening the eyes or moving.

d. **In buildings:**

(1) Dive for cover or fall flat on the floor, back to windows; cover could be under a table, desk, counter, on the floor near the outer basement wall, etc.

(2) Close the eyes and shield the face with the arms or gloved hands; keep as low as possible.

(3) After the bang is heard, wait until the debris has finished falling before opening the eyes or moving.

16. **Decontamination.** Decontamination will be carried out in three ongoing stages, i.e., immediate, operational and complete. Immediate decontamination, using the buddy system, will be performed by the individual as soon as possible after exposure using any resources immediately available.

a. The decontamination of a dry contaminate (dust/ash) is accomplished by using available equipment such as brushes, brooms, rags, and even bushes to wipe, dust, brush and shake contamination from the skin, hair, clothing, mask, personal weapon, radiac instruments, personal equipment, and load-carrying equipment. The individual, as well as those assisting in decontamination, must avoid breathing contaminated dust. Ideally masks should be worn.

b. If contamination is from radioactive particles in rain, mud, etc., brushing and shaking will not remove the hazard. Exposed parts of the body and some personal equipment can be washed, preferably using hot water and soap if available. In general, however, wet contamination will have to be decontaminated when time and resources are available or when operational decontamination is undertaken.

c. Radiac instruments may be used to locate contamination and to check the effectiveness of decontamination.

17.   **Emergency Actions.** The hazard from ingesting contaminated food and water for a short period may be considered acceptable during wartime. If only contaminated supplies are available, the individual may be ordered to consume them rather than go thirsty or very hungry.

BIOLOGICAL AND CHEMICAL DEFENCE

18.   **Threat.** Biological and Chemical Warfare (BCW) agents will be delivered in liquid, aerosol, or vapour form. They may be delivered by shell, rocket, bomblet, or aerial spray and as their effectiveness is considerably reduced by good defensive measures, the enemy will try to cause the maximum casualties by making a surprise attack.

19.   In the case of the most toxic agents, there will be only a very few seconds in which warning must be given and protective measures taken. Many chemical agents are colourless and odourless and are therefore at present virtually impossible to detect until casualties start to occur. The warning system must take this into account.

20.   **Protection.** Individual CW protective clothing provides excellent protection against all known CW agents. It consists of:

   a.   C4 Chemical/Biological mask;

   b.   CW ensemble, including CW overalls, CW overboots and CW gloves plus mask; and

   c.   combat spectacles (if required).

21.   To minimize heat stress problems, personnel should not be kept in the full CW protective clothing any longer than absolutely necessary. Partial wearing of the CW ensemble permits the individual to adopt full protection immediately. This is accomplished by dressing in TOPP Medium. Full protection is provided in TOPP High. (See figure 10-5-2 TOPP Levels)

22.   At figure 10-5-3. the recollection of the BCW Survival Rule is assisted by the use of mnemonic AROUSE.

RULE	REMARKS
When the use of the BCW Survival rule is ordered, and when: a. **Artillery** or other bombardment is experienced; b. **Raids** or hostile acts are made by aircraft against your unit; c. **Odours,** liquids or solids which are suspicious are detected; d. **Unusual** bomblets or missiles are seen; e. **Smoke** or mist from an unknown source is present; or f. **Effects** on your body or on others, or on animals are noticed, then you must assume the presence of chemical or biological agents and perform the IA drill (CB).	The most likely effects of chemical agents are: a. blurred or dimmed vision; b. irritation of the eyes; c. sudden headache, dizziness; d. wheeziness, tightness of chest or choking; e. difficulty in, or increased rate of breathing; and f. nausea, vomiting, or weakness

Figure 10-5-3 Biological Chemical Warfare Survival Rule - AROUSE

SER	DRILL	REMARKS
(a)	(b)	(c)
1	MASK	Masking must be completed within 9 seconds.
2	SOUND LOCAL ALARM	Shout **"GAS, GAS, GAS" or "SPRAY, SPRAY, SPRAY"** repeatedly until warning is effected.
3	GET UNDER OVERHEAD COVER	To reduce the possibility of contamination, take cover if possible.
4	CHECK DETECTOR PAPER, and for any other signs of liquid or chemical attack.	
5	If skin or detector papers are contaminated, **PERFORM THE IMMEDIATE DECONTAMINATION DRILL (CHEMICAL).**	
6	If you have nerve agent effects, use **SELF AID** (antidote treatment - Oxime Atropine Auto Injector).	Oxime Atropine must be administered as soon as nerve agent poisoning is confirmed but not before.

Figure 10-5-4 Immediate Action Drill (Chemical or Biological)

23.   **Unmasking**. Unmasking is done only on the executive order **GAS CLEAR**. The unmasking order is issued by the commander after he has determined that it is safe to do so. The following procedure should be used to determine when personnel can safely unmask:

a.   The CW agent is identified by the Chemical Agent Detector Kit - C2 Kit or the chemical agent monitor. If the agent cannot be identified, the procedure at sub-paragraph g below should be used.

b.   Perform the tests for 1 /2 hour, unmasking as specified in the C2 kit instructions and, for vapour agents, use chemical agent monitor if available.

c.   When the 1 /2 hour test for specific agent concerned is negative, ensure that no other agents are present by performing the standard agent classification tests as per the C2 kit instructions.

d.   When all tests are negative, personnel may unmask for 1 /2 hour. Personnel must be aware that pockets of agent vapour and contamination may still exist, and therefore, if symptoms of agent poisoning reappear, the IA drill Chemical or Biological (CB) must be performed.

e.   While personnel are unmasked for the 1 /2 hour period, the tests for 12 hour unmasking are performed as specified in the C2 kit instructions. If all tests are negative, personnel may remain unmasked for a total of 12 hours. Readings with the chemical agent monitor should also be taken at regular intervals.

f.   If no ill effects have been experienced by the end of the 12 hour period, it can be considered safe to remain unmasked indefinitely.

g.   If an unknown agent is encountered, personnel should remain masked until they clear the area. If this is not possible, one person should be selected to break his mask seal for ten seconds and inhale normally. The person should then be observed for ten minutes and if no ill effects occur, he should then remove his mask for five minutes. Again, if no ill effects occur, general unmasking for 1 /2 hour and then 12 hours may be ordered. As this is a trial and error procedure, all personnel

must be prepared to remask immediately if any ill effects are experienced.

24.   The above procedures are valid only for a localized area and for unchanging weather. Any rise in temperature will shorten the time personnel can remain unmasked.

25.   **Immediate Decontamination.** This decontamination is performed by the individual immediately after exposure. The aim is to remove contamination from the body, personal equipment and immediate surroundings in order to avoid becoming a chemical casualty, see Figure 10-5-5. Further decontamination will be done under unit supervision.

STEP	DRILL	REMARKS
1	Prepare a new decontaminating mitt and place it on the hand.	
2	Decontaminate the gloved hand.	
3	Remove the helmet (if worn) and place it in a convenient location.	The helmet can be hung on the arm, or put between the knees or on the round, but in such a manner as to avoid further contamination.
4	Undo the velcro fastener of the hood.	
5	Take a few deep breaths to steady the breathing and hold the last one.	Do not breathe again unless the mask is on. It may help to exhale slowly while it is off.
6	Push the hood back.	
7	Unmask, keeping the eyes closed, and hold the mask in the gloved hand.	Hooking the thumb in the bottom strap may help to orient the mask when remasking is necessary.
8	Rapidly but thoroughly decontaminate the following, in the order stated: a. REMEMBER: **BLOT, BANG, RUB;** (1) face; (2) ears, neck and hair; and (3) inside of the mask.	Decontamination cannot be completed in one breath. re-mask whenever more air is required. Normally three to four unmaskings will be necessary. a. Use copious amounts of fuller's earth. b. Pay particular attention to the area surrounding the eyes, nostrils and mouth. c. Pay particular attention to under the chin, behind the ears, and back of the neck d. Pay particular attention to eye pieces and outlet valve.
9	Mask, blow out, test for air tightness.	
10	Decontaminate the headharness and outside of the mask.	
11	Replace and secure the hood and helmet.	
12	Replace the decontaminating mitt in its package and return it to the mask carrier.	

Figure 10-5-5 Immediate Decontamination Drill (1 of 2)

STEP	DRILL	REMARKS
13	Replace detector paper on the left lower arm and right lower leg of the CW coverall. Place a new sheet **beside** the sheet on the right upper arm.	
14	Decontaminate personal equipment using the same decontaminating mitt.	Ensure weapon mechanism in not clogged with fuller's earth.
NOTES		

1 . The drill normall requires from five to ten minutes to complete.
2. If nerve agent effects occur durin the drill, the individual must replace his mask, administer atropine-oxime Auto-injector), then continue the drill if possible.
3. Steps 8 and 10 may be more efficiently performed by another individual.
4. The neck, sections of the hair, and the ears may be decontaminated during periods when the mask is on and the breathing is being steadied. This will only be necessary if the hood of the CW coverall had not been up and fastened.

Figure 10-5-5 Immediate Decontamination Drill (Chemical) (2 of 2)

26.   **Eating.** Eating will only occur in clean areas once the section has been decontaminated at a decontamination centre.

27.   **Practical Work Rest Schedule.** The prolonged wearing of full protective dress will not always be practicable because of operational considerations or climate. In high temperatures, the incidence of heat exhaustion will be high. In addition, breathing resistance and physiological stress will rapidly cause fatigue. The environmental temperature and the work load must be considered when determining work ratio for the section while wearing full protective dress. The general effect at the following temperatures may be expected.

   a.   below 24°C, there is a low risk of heat stress casualties unless sustained heavy work is undertaken;

   b.   between 24° and 30°C, some caution is required even at moderate work level; and

   c.   above 30°C, there is a very high risk at any work level.

28.   The following examples are practical work rest schedules for fully protected personnel wearing the mask at 24°C with the number of work rest cycles depending on the subjective degree of recovery.

SER	ACTIVITY	TYPE OF WORK	TIME	
			WORK	REST
(a)	(b)	(c)	(d)	(e)
1	Rifle platoon digging in.	Heavy	20mins	20mins
2	Rifle platoon approach march (5 km/h, 20 kg load.	Moderate	30mins	30mins
3	Rifle platoon in the attack.	Heavy	30mins	30mins
4	Cross country march 4 km/h, firm footing, 18 kg load.	Moderate	30mins	30mins
	4 km/h, firm footing, 20 kg load.	Heavy	20mins	20mins
5	Bivouac activities, easy digging, at slow pace (cycle	Light	45mins	20mins
	can be repeated 4-6 times).	Moderate	20mins	20mins
6	Patrolling, inspections and siting weapons.	Moderate	20mins	20mins
7	Defensive posture, occupying defensive position.	Very light	continuous	
8	Improve defensive position laying mines, stringing wire, digging alternate position.	Moderate	20mins	20mins

Figure 10-5-6 Work Rest Schedule

CAUTION

The agent's lethality varies greatly with the temperature.

CHAPTER 11

FIGHTING IN BUILT-UP AREAS

SECTION 1

TACTICAL CONSIDERATIONS

INTRODUCTION

1 .   The fundamentals of the attack and the defence hold true for operations in built-up areas. However, their applications will be considerably affected by the conditions and the extent of the buildings, which could range from a very small village (four or five houses) or farm complex to a large city. It is often easier to defend a built-up area than to attack it, and small bodies of determined troops can hold out for a considerable time against superior forces, except in smaller villages.

2.   The battle techniques for Fighting in Built-up Areas (FIBUA) will be published in B-GL-302-006/FP-001. That publication will contain the individual fighting skills and techniques for FIBUA. The following information is based on the latest elements of doctrine accepted by the Infantry Corps.

CONSIDERATIONS

3.   The brunt of FIBUA is at the section and platoon level. FIBUA is characterized by:

a.   **Three Dimensional Battlefield.** The proximity of buildings creates a three dimensional battlefield which necessitates fighting on the floors and roof as well as in basements, sewers and subways. Troops must be capable of adapting their battle drills to this type of fighting.

b.   **Restricted Fields of Fire and Observation**

(1)   Inside buildings, weapons will be sited well back from windows thereby giving concealment to the firer. Fields of fire are sacrificed to achieve surprise and protection.

(2)   Observation will be limited except for streets and open areas such as squares and parks. The attacker and defender will both cover these open areas by aimed fire.

(3)   Supporting weapons will have to be much further forward to support the attacker.

(4)   Close mutual support will be difficult.

(5)   Control will be difficult and much will depend upon the leadership, initiative and procedural expertise of junior commanders.

c.   **Cover from View and Fire**

(1)   A built-up area offers excellent cover and concealment for both the attacker and the defender. The defender has the advantage, as the attacker has to expose himself to move through the area.

(2)   The effectiveness of cover depends upon the density of the buildings and the nature of their construction. Buildings constructed of flimsy or inflammable materials are easily destroyed or burned and may prove a death trap for those using them.

(3)   Buildings built of heavy stone and concrete with thick walls and cellars give excellent cover even when bombardment has reduced them to rubble.

d .   **Difficulty in Locating Enemy Fire**

   (1)   The attacker will have difficulty in locating fire as the majority of weapons will be sited back from windows and doors and in a number of cases they will be fired through small slits or loopholes.

   (2)   Observation will be difficult because of the smoke and dust which collects and hangs in the streets.

   (3)   Sound is magnified and echoes between buildings and streets.

   (4)   Indication of targets will be difficult. Tracer is the only effective method of target indication under these conditions.

e.   **Close Quarter Fighting**

   (1)   The fighting will be at very close quarters. The enemy will be in the next room, in the next building or on the other side of the street.

   (2)   Hand to hand fighting is a probability rather than a possibility when fighting a determined enemy.

 f.   **Snipers.** Experience has shown that SRAAW are most efficient weapons with which to deal with enemy snipers in built-up areas. SRAAW should not be aimed at openings such as doors and windows but at the masonry just below the window or at the side of the door or aperture through which the sniper is firing.

g.   **Vehicle Movement.** Built-up areas are the ultimate "close country". Vehicles operating in them are vulnerable in all three dimensions, subject to attack from ground level, from the upper stories of buildings or from troops operating below ground. Likewise, their manoeuvrability is severely restricted.

h .   **Supporting Arms and Support Weapons**

(1)   **Artillery and mortars.** Indirect fire supports the fighting on the perimeter and within the built-up area. Medium and heavy howitzer projectiles are effective against concrete buildings and other fortifications. Some units will have counter-bombardment and counter-mortar missions. If necessary, some guns may be employed in the direct fire role in support of the elements fighting in the built-up areas. Mortars will be of utmost use because of the high trajectory which will permit target engagement from behind high cover onto enemy positions which are also behind high cover.

(2)   **Armour and Antiarmour Weapons.** Armour can give very effective close support, but tanks will require all round protection from infantry whilst in the battle area. Conversely, the characteristics of the SRAAW(H) make this weapon ideal for antiarmour defense in built-up areas because it can defeat enemy tanks frontally at distances from 40 - 600 metres, and can be safely fired from inside a room.

(3)   **Engineer and Assault Pioneer.** Engineer and assault pioneer support will be essential both in the preparation of the defense and during the attack. For attacks in built-up areas, engineers provide engineer reconnaissance, assist in mobility by clearing obstacles and by opening routes for both infantry and tanks. Demolition teams augment the assault pioneers in a battle group. During the consolidation, engineers assist in emplacing obstacles and clearing fields of fire. There are numerous additional tasks such as explosive ordnance disposal (EOD) and rescue support as well as advice and expertise in general engineering functions associated with public utilities and buildings.

(4)   **Aviation.** Helicopters are used for insertion of troops, deploying observation posts, air observation posts, rebroadcast, medical evacuation, or resupply. Attack

helicopters may be employed to support the fighting in the built-up area but they may be more effective attacking enemy reserves or enemy troops on the outskirts.

i.   **Chemical and Biological Weapons.** Chemical and biological weapons are effective in built-up areas to block approaches and create casualties, thus troops must conduct monitoring and be prepared to adopt adequate defensive measures.

j.   **Command, Control and Communications.** Command and control is more difficult in built-up areas due to the different deployment patterns and to the difficulty in determining the locations of forces. The effectiveness of VHF radios will be considerably reduced due to the screening effects of buildings and to interference from high tension wires. There will be greater reliance on initiative by junior commanders, alternate means of communicating and recognition signals.

k.   **Civilians.** The presence of civilians may hamper operations. Troops must be taught target discrimination which is the act of distinguishing between threat and non-threat personnel in the area. This type of training is most important to prevent fratricide as well as to prevent the killing of non-combatants. The treatment of civilians is a planning consideration but a humanitarian approach should always be followed.

l.   **Devastation.** Devastation caused by indiscriminate air attack, shelling or nuclear weapons will severely hamper movement, particularly that of the attacking force. The defender, on the other hand, can greatly enhance his defence by preparing defensive positions in the rubble which will give him greater protection than standing buildings.

m.   **Booby Traps.** By virtue of the environment in which it takes place, fighting in built-up areas lends itself to the use of defensive and harassing devices such as booby traps. Strong points, likely strong points, avenues of approach, likely areas suitable for shelter as well as randomly selected locations can

be expected to be booby trapped by the enemy. These can vary from the very small to the very large: from those designed to be used against individuals to those designed to bring down whole buildings. Booby traps can have psychological effects out of all proportion to their physical effects. Consequently, engineer and pioneer support must be considered early on in planning and grouping must give advancing or defending forces the ability to either clear or implant booby traps. Booby traps will be an integral part of the overall obstacle plan. Both must be carefully coordinated and controlled.

SECTION 2

ATTACK

FUNDAMENTALS

1 .   The fundamentals of the attack apply equally to attacks in builtup areas. A battle group may attack a small village or town but would participate as part of a formation in an attack on a town or city.

2.   When tasked to clear a village or part of a town, the battle group commander will divide the area into sectors on a combat team basis, and platoons and sections will be given objectives within these sectors.

3.   At the platoon level, the fundamentals for attacking a built-up area are simple planning, control, thoroughness, momentum and covering fire.

4.   **Simple planning.** The platoon commander must make a simple plan. He will achieve this by:

   a.   choosing short bounds and limited objectives, a room or house at a time; and

   b.   having a firm base from which all movement can be covered by fire.

5.   **Control.** Control in street fighting is difficult because of restricted observation, and fighting tends to be small independent actions. It therefore demands initiative and aggressiveness at the lowest level and decentralization of control. Platoon and section commanders must therefore always be well forward.

6.   **Thoroughness.** Each objective must be cleared thoroughly and consolidated. Every building, room, attic, cellar, garden shed, and all large drains and sewers must be checked. Walls must be checked for

mous50les, especially in the upper floors and attics of terraced houses and apartments.

7.   **Momentum**. The attack must be planned in depth and the platoon commander must be well forward to make quick decisions and issue orders for quick attacks. As each objective is taken, consolidation must be carried out rapidly. This will ensure that the momentum of the attack is maintained.

8.   **Covering fire.** Open spaces, particularly main roads, will be enemy killing zones. Before crossing these spaces there must be covering fire, whenever possible, from the other side. No section will move into the open unless a covering group is supporting it. Maximum use must be made of smoke and all the weapons at the platoon's disposal.

SUPPORTING ARMS AND WEAPONS

9.   **Artillery and Mortars.** Artillery and mortars can be used against the enemy held areas before the attack as well as to harass and hinder the movement of reinforcements during the attack.

10.   Close support will be difficult because of the hand to hand nature of the fighting, but FOOs and MFCs moving well forward should be able to bring down fire as close as the next street or one block of buildings away.

11.   White phosphorus can be used to start fires to divert some of the defender's resources to fire fighting, but the direction of the wind and the effect of the smoke must be carefully considered. The projectiles have a delay fuse which can be used to get bombs to explode inside buildings.

12.   **Tanks**. In house to house and street fighting, tanks move down the streets, protected by the infantry, and support them by blowing entry holes in the more substantial buildings with their main armament and supporting the assault with their machine guns.

13.   The tank is the most effective weapon for heavy direct fire against structures. They can also give physical cover to men crossing bullet swept areas. Tanks with dozer blades can be used to clear rubble. They can lay down speculative fire.

14.   Tanks are, however, vulnerable in built-up areas. Streets and alleys constitute ready-made fields of fire for defenders. Motorized traffic is greatly restricted, channelled and vulnerable to ambush and close-range fire. Tanks are at a further disadvantage because their gun cannot be depressed or elevated sufficiently to fire into the basements or upper floors of buildings at close range.

15.   **Engineers and Assault Pioneers.** The main tasks of the engineers and assault pioneers in the attack will be opening up routes for vehicles and clearing mines and booby traps from captured buildings.

16.   **APC**. APCs may be used for:

a. the movement of reserves;

b. the replenishment of ammunition and explosives;

c. the evacuation of casualties; and

d. command posts.

PLANNING AND PREPARATION

17.   Fighting through a built-up area will be planned in detail from maps, air photographs, town plans, patrol reports and informers' statements.

18.   The battle group commander will divide the area into sectors which will be allotted to combat teams. Each sector will be attacked systematically with platoons having limited objectives. Individual buildings will be given as objectives to sections, or if a building is large enough, to a platoon.

19.   Troops should avoid moving in streets and open areas, if possible, and should take advantage of the cover offered by buildings, ditches and sewers.

20.   Streets should be cleared along their length, with sections advancing from house to house by mouseholing, over roofs or through back yards or sewers. Although the attack will be planned in depth, reserve sections and platoons will be passed through as leading platoons and sections are halted, as they should not be committed to a fixed plan.

21.   In this type of operation two platoons should operate in parallel on opposite sides of the street with the reserve platoon held close to hand.
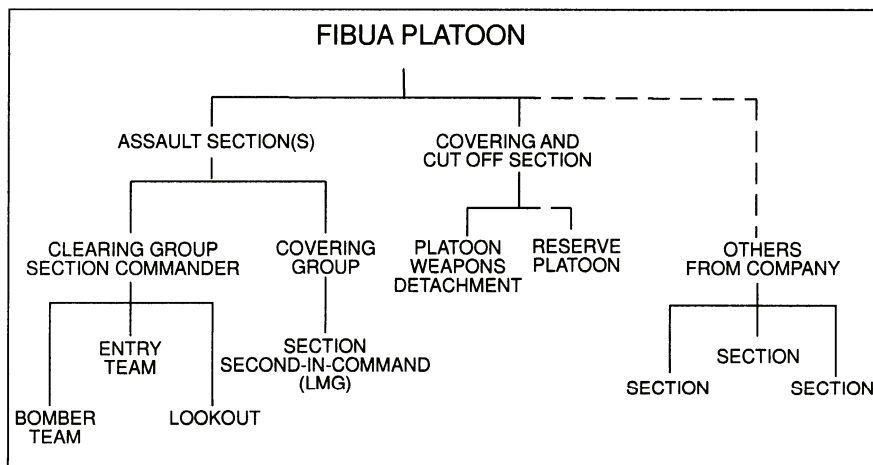
Figure 1 1-2-1 Platoon FIBUA Organization

BATTLE PREPARATION

22.   Additional preparations for battle are required before a platoon begins clearing a built-up area:

    a. **Equipment.**

      (1) Webbing should be adjusted so that the soldier can easily get through narrow passages and holes.

      (2) Officers and NCOs must carry binoculars, matches, chalk, flashlights and morphine.

      (3) Toggle ropes and grappling hooks should be obtained or made, to assist in climbing walls.

      (4) Rope ladders should be made or obtained.

    b. **Ammunition.**

      (1) All soldiers will carry additional small arms ammunition projectiles and grenades.

      (2) Extra anti-tank ammunition, 60mm mortar smoke, and prepared explosive charges for mouseholing should also be carried.

      (3) Carrying parties, vehicles or tanks will be arranged to resupply leading troops.

      (4) All ranks must carry tracer to indicate targets.

    c. **Medical.**

        (1) Extra shell dressings and morphine should be carried.

(2) Casualty collecting points should be arranged. Company stretcher bearers or ambulance will carry men back from these points to the UMS.

(3) Extra drinking water should be available as far forward as possible.

d. **Feeding.** Feeding will be difficult due to the close quarter fighting. Every effort should be made to get hot food forward during a lull in the battle.

e. **Evacuation of Prisoners and Civilians.** Arrangements will have to be made for the evacuation of prisoners and civilians. Civilians must be kept off the streets; platoon and sections should do their utmost to get them into a cellar or any protected area away from the immediate battle.

HOUSE CLEARING

23. All attacks on built-up areas involve gaining a foothold and then clearing the area methodically to prevent its reoccupation by the enemy as the advance progresses.

24. The section is the basic element which can clear a small house of up to about six rooms. Anything large, like a row of houses or a large country house, takes a platoon with sections leap-frogging, vertically or horizontally as the case may be.

25. The techniques and drills for clearing houses and buildings are well explained in B-GL-302-006/FP-001.

SECTION DRILL FOR CLEARING A HOUSE

26. On receipt of orders, the section commander will reconnoitre his objective, make his plan and issue orders to include:

a. point of entry,

b. covering fire (to include smoke if necessary), and

c. support from other sections or arms.

27.   **Action of the clearing group.** The bombers throw grenades into the room through which the entry is to be made. After explosion, the entry team goes into the house at the chosen point of entry, engaging any enemy found within. They clear the first room and shout **"clear".** The section commander, the bombers and the lookout enter.

28.   The lookout positions himself so that he can readily act as runner and make contact with the covering group and the platoon commander. The section commander and the bomber team now clear adjacent rooms while the entry team guards stairways and passages.

29.   As soon as a firm base has been established the covering group is called forward and the house clearing continues.

30.   **Action of the covering group.** The task of the covering group is to cover the clearing group when the latter moves, especially when it moves in the open. The covering group should therefore keep as close as possible to the clearing group.

31.   The drill for a section clearing a house is:

a.   The covering group will take up a fire position to cover the point of entry and, if possible, act as cut off. To get to its position it may require fire support or smoke from the assault group.

b.   When the LMG fires, the entry team enters the house preceded by a grenade from the bomber team. Once in the house they will clear the room shooting into the ceiling or floor and any cupboards, clothes closets and any area which could hide an enemy.

c.   The section commander, bomber team and lookout enter the house on the "all clear" signal. The bomber team clears the,

house, room by room, storey by storey, from the roof to the cellar, leaving the lookout at the point of entry and the entry team covering stairs and landings. The lookout is the communication link with the covering group and the remainder of the platoon.

d.   When the house is clear the section commander will consolidate in the area of the house. He will cover all likely enemy approaches including the roof and cellar.

PLATOON DRILL FOR CLEARING A BUILDING

32.   When the house or building is too large for an assault section, or when several houses or buildings are to be cleared, the platoon will conduct the operation.

33.   This type of mission will require support of tanks, engineers and pioneers. The tactics which the platoon commander will probably favour are:

a.   An assault section will gain a foothold in the first building, covered by the Covering and Cut Off Group.

b.   When the assault section is held up or when it has achieved its aim, the platoon commander may pass another assault section through to secure the second objective. The first assault section will now provide the covering fire for the second assault section's action.

c.   The reserve section will initially give covering fire. Later, with or without its covering fire team, depending on the cut off plan and size of the house being attacked, the reserve section will be led by the platoon commander into the building to pass through the assault section and continue the clearing operation.

34.   The platoon attack on a building will be conducted in the following sequence:

a.   the platoon commander isolates the building by fire;

b.   a foothold is gained by an assault section; and

c.   the building is cleared methodically.

35.   **Isolate.** Isolation prevents the escape or reinforcement of its defenders and is normally coordinated at the combat team level; however, the platoon may have to isolate it with its own resources. Whenever possible, the platoon must secure the ground dominating the approaches. Enemy defences or natural obstacles may prevent complete isolation. As a minimum , the attacker must secure positions from which he can support the point of entry into it and its step by step capture.

36.   To accomplish this, weapons are deployed so that they control the streets and the open areas between the buildings. Mortar fire between buildings also helps to isolate them. Tanks, machine guns and other direct fire support weapons fire on the objective from covered positions but must avoid prolonged firing from one position. Rather, they fire from a series of position, moving from one to another for more and better fields of fire.

37.   Direct fire support tasks are assigned as follows:

a.   machine guns fire along streets and into windows, doors etc.;

b.   **SRAAW** fire at enemy tanks and APCs;

c.   tanks fire at targets protected by walls and make entrances in buildings; and

d.   soldiers fire at targets of opportunity.

38.   **Assault.** The assault section must first gain a foot hold into the building. Before the assault, smoke is used to conceal the assaulting platoon. The flanks of platoons are secured by direct fire weapons firing down nearby streets and by the employment of the reserve.

39.   The defenders can be suppressed with tank, **SRAAW,** machine gun, mortar or artillery fire to permit entry at the least defended point or through a hole breached by direct or indirect fire. The accomplishment of this phase reduces or eliminates the defender's ground observation and direct fire on to the approaches. The attacker uses cover and concealment in the foothold area to dislodge the defender's weapons and to commence his systematic clearance of the building.

40.   **Clear.** This phase consists of the advance through the building to clear the enemy. There must be no delay between phases so as not to give the enemy time to reorganize.

41.   During this phase, the attack assumes more specialized characteristics. Buildings should be cleared from top to bottom: this will necessitate that the assault section which enters onto a ground floor rapidly work its way up and clear from the top down. The platoon commander must be well forward to offset the difficulties of control. However, when faced with a determined enemy, operations cannot be hurried.

42.   Heavy casualties, loss of control and the need to recapture objectives reoccupied by the enemy will often cause substantial delays. On completion, the platoon must consolidate and reorganize to repel a counter-attack or to continue the attack.

CLEARING A SMALL VILLAGE

43.   Very small villages, of only four or five houses, or large farms may be given to a single platoon to clear. The method of clearing is similar to street fighting but with certain variations.

44.   The drill for clearing will be:

a. **Cut Off Party.** The cut off party should consist of the platoon second in command with the platoon weapons detachment. It can be supplemented with a LMG team from the reserve section. It should work its way to the rear of the village or farm without being seen and get into a position where it can cover the enemy's likely line of retreat. Clearing will not start until it is in position.

b. **Covering Section.** The covering section will get into a fire position to cover the main street or farmyard.

c. **Assault Section.** The assault section will clear buildings with the aim of driving the retreating enemy into the chosen killing ground.

d. **Signals.** A pre-arranged signal should be given by the platoon commander to indicate that the village or farm is clear and that it is safe for his own men to come out of the building.

e. **Platoon HQ.** Platoon HQ should be located in the area of the covering section with the task of protecting its rear and providing reinforcements. The platoon commander should establish himself in a good OP (as close to the covering section as possible), from which he can read the battle and send reinforcements where they are most needed. He should coordinate the clearing and not remain permanently with one section.

45.   The following general points should be kept in mind:

a. The defenders may not necessarily occupy the buildings. Gardens or rough ground may provide better, less obvious cover.

b. Although all the available grenades must be given to the assault group, men must not become too grenade minded. If they

throw grenades into every room they will soon exhaust their supply and will have none available when they are most needed. This is a matter of battle discipline.

c.   Soldiers should shoot through all doors ceilings or wooden walls before entry, but they must search carefully as well. They must not assume that everyone in the room has been killed. The enemy may lie down or may stand against a wall when being fired at through the ceiling. Soldiers must bear in mind, however, that civilians may still be inside the house.

d.   If the houses have front gardens, they must be investigated carefully from the upper windows before passing on to the next house. If these front gardens are very large, special arrangements will have to be made for the covering section to move up and clear them.

e.   The covering section must keep moving up as necessary. Clearing should not go on unless the main street or farmyard is covered. The covering section should advance by fire and manoeuvre and should form its own assault group when it cannot be backed up by one of the assault sections. Some houses cannot be entered except from the main street. These can best be cleared by the covering section as it moves forward.

f.   **Booby Traps.** Beware of something that looks particularly inviting as it may be a booby trap.

STREET FIGHTING IN VILLAGES AND TOWNS

46.   In clearing a street of a large village or town, two platoons may work in parallel along opposite sides, their advance being controlled by the combat team commander. The platoons will move forward alternately giving fire support to each other.

47.   Each platoon commander must first arrange covering fire for the leading section to enter the block he is to clear. The section must clear

the first house, which is then made into a firm base. Soldiers from this section should be posted so that they can cover the second section when it passes through them to secure the next house. Sections must be kept within easy reach by voice and hand signal.

48.   Sections advance from house to house by mouseholing, working through walls, over roofs, through sewers or back yards and keeping away from the open street exposed to enemy fire. Ideally each house is entered at the top and cleared downwards. There must be thorough consolidation in each house as it is cleared, including outhouses and cellars.

49.   Consolidation should be on the ground floor and not the top floor. Holding dominating buildings, isolating empty buildings by fire and careful siting of snipers will help to stop enemy infiltrating into houses already cleared. This task will be more difficult at night.

50.   In outlying or lightly defended areas, the platoon may proceed along the street mounted, with a dismounted element forward to reconnoitre key points such as intersections or bridges.

EMPLOYMENT OF TANKS WITH INFANTRY

51.   Tanks may accompany and support the platoon in street clearing. When moving down narrow streets or streets cluttered with debris, dismounted infantry should move ahead of the tanks, clearing the buildings on each side.

52.   When needed, the tanks move to firing positions secured by the infantry to engage suitable targets. When a section of the area is cleared, the infantry again moves forward to clear the next section.

53.   The tanks and infantry should provide covering fire to support each other's movement. Infantrymen communicate with the tank crews by using the infantry/tank telephone and by hand signals.

54.   For movement down wider streets or streets not choked with rubble, the lead infantry platoon may have a troop of tanks in support,

one tank on each side of the street with the other tanks moving behind the infantry, firing at targets in the upper stories of the buildings. The infantry can protect the forward movement of the lead tanks by destroying enemy SRAAWs, while the rear tanks support the move of the lead sections or platoon.

55. The platoon commander is careful not to tell the tank troop commander how to support him, but rather what support he requires.

CONTROL MEASURES

56. The coordination and control of forces and fire is complicated by the restrictive nature of the urban environment. It is facilitated, however, by a sound plan with a balance of implicit and explicit control measures for decentralized execution at the lowest level.

57. The control measures most frequently used within a built-up area are:

a. **Objectives.** While dominant features that provide observation or physical control over access routes through or around the built-up area remain important, additional consideration must be given to its facilities and man-made objects. Initial objectives to gain a foothold are usually located on the outer edge of the built-up area. When occupied, they provide concealment and cover to the attacking forces. Sub-unit objectives are usually one to two blocks in depth. Their exact size is determined by the nature of the built-up area. An intermediate objective may be assigned by any commander when its seizure is essential to the accomplishment of the mission. When an enemy cannot be bypassed, the assignment of intermediate objectives will frequently be required. When feasible, final objectives are located on the exit side or beyond the built-up area.

b. **Phase Lines.** Phase lines are routinely employed to regulate the advance of attacking forces. They may also be used in lieu of objectives. Principal streets, rivers and railroad lines which are easily identified can be used as phase lines.

c. **Boundaries.** Boundaries are normally established in alleys or within a block of buildings to insure that both sides of a street are included in the zone of the sub-unit.

d. **Sectors.** The area must be divided into clearly defined and recognizable sectors which should be numbered or lettered and have a named commander. Sectors will normally be allotted as combat team clearance tasks and then divided into sub-sectors for platoon tasks, bearing in mind the need for local reserves. The area must be cleared methodically sector by sector.

e. **Report Centres.** Report centres should be established in each sector, to which ammunition and supplies can be brought and from which casualties can be collected.

f. **Nicknames.** All key points, important buildings, main streets and open areas should be given nicknames.

g. **Checkpoints and Junction Points.** Street corners, buildings, railway crossings, bridges or other easily identifiable features can be designated as checkpoints or junction points. These points facilitate reporting locations and may identify specific points where the commander desires units to make physical contact or where liaison between units or sub-units is to take place.

58. **Command and Control.** Junior commanders should be well forward leading their platoons and sections. Casualties among them will be high and constant leap-frogging of sections and platoons must be employed to both ease the strain and maintain the momentum of the attack. All commanders are extremely vulnerable in this type of close quarter fighting and are attractive sniper targets.

59. **Security.** The enemy may resort to spoiling attacks and infiltration of the flanks and rear of attacking forces. Frequently he will position individuals and small units in concealed locations to perform stay-behind missions.

60.   Built-up areas provide the defender excellent cover and concealment while limiting the attacker's observation. The requirement to maintain the continuity of the attack results in bypassing isolated pockets of resistance which further complicates the problem of security.

61.   At the combat team level and above, it is necessary to increase overall security precautions while operating in highly restrictive areas. Also, it is essential to provide security forces to escort combat service support and combat support units as well as to monitor, patrol and guard possible infiltration routes.

62.   Platoon commanders must be conscious of the dangers and take measures to guard against sabotage, guerrilla warfare and intelligence gathering by a hostile population.

SECTION 3

DEFENCE

CONDUCT OF THE DEFENCE

1. Defensive operations will be conducted in built-up areas when:

    a. retention of the areas) offers decisive advantages;

    b. the defence of the area is integral to the overall concept of operations;

    c. the defending forces require the cover and concealment afforded by built-up areas; or

    d. the inherent obstacle nature of such areas permits more economical use of troops to release forces to more critical areas.

2. The defence of a built-up area is organized around key terrain features and buildings which preserve the integrity of the defence and provide ease of movement to the defender. Defences are prepared in depth and infantry fights supported by other arms.

3. In small towns and minor built-up areas, static defence is used while in larger cities and built-up areas, the defence is more fluid, with the defender concentrating on moving forces from key terrain features/buildings to other similar features to meet the main thrust. Although the principles employed are generally the same as for other defensive operations, the differences are in the techniques employed and the degree of emphasis on the fundamentals explained hereunder.

    a. When time permits, planning for the defence is detailed and centralized. Since the majority of actions are conducted by small units, control is decentralized.

b. Because of the likely abundance of concealment and cover, yet limited observation, special attention must be given to mutual support and all-round defence to counter enemy infiltration. The nature of the ground usually leads to close quarter combat with enemy forces. Defensive measures may include the barricading of streets and the employment of short-range direct fire weapons.

c. Ideally the defence should be based on the following:

  (1) mutually supporting posts on the perimeter which withdraw or shift when they can no longer influence the battle;

  (2) mutually supporting strong points in depth, with local reserves; and

  (3) a centrally located reserve.

d. The forward line of own troops (FLOT) should be near the forward edge of the city or town. This prevents the enemy from entering the outskirts and using the cover provided by buildings to deploy his forces. The FLOT should not appear to the enemy as a clearly defined line on which he can concentrate his supporting fire. Under some conditions, it may be necessary or desirable for the FLOT, or portions of it, to be back from the perimeter.

e. Defences are coordinated in order to prevent encirclement and penetration, and all units and sub-units are assigned specific areas to be defended. Measures are taken to maintain maximum surveillance over the entire area, and to defend, at short notice, in any direction.

f. Buildings or groups of buildings may be used as obstacles to the enemy. Their canalizing effect may be improved by using local material, barbed wire, craters and road blocks to create barriers. As a result of their demoralizing effect of the enemy, booby traps in houses and obstacles will contribute significantly

to a successful defence. The obstacle plan must be carefully coordinated and disseminated to all units, otherwise the defender's main asset, his ability to move quickly based on the knowledge of the ground, will suffer. This will impose heavy demands on engineer resources which will have to be closely controlled.

g.   Counter-attacks are characterized by centralized planning and decentralized execution. Small units, taking advantage of the cover and concealment afforded by built-up areas, should counter-attack key terrain/buildings in order to drive the enemy from the area, to isolate his forces, offset his advantage of mobility and subject him to piecemeal destruction.

h.   Air defence units, other than those whose envelope provides protection from outside the defended area, are normally located near the forward edge of the city or town or on the highest available and usable ground, to allow for early engagement of enemy aircraft.

PLANNING CONSIDERATIONS - UNIT AND SUB-UNIT LEVELS

4.   **Combat intelligence.** In planning the defence, emphasis must be placed on intelligence. To supplement the intelligence data provided by patrols and higher headquarters, combat team/company commanders and platoon commanders must conduct a thorough reconnaissance of the area to be defended to include the surrounding terrain.

5.   During the reconnaissance, they should complete several tasks:

a.   First, they must prepare a sketch map of the area and number all the buildings on the map. Enough of these sketches are prepared so that each platoon commander has a copy.

b.   Second, they should prepare a notebook which describes each building. Buildings are evaluated and carefully inspected to determine their defensive strengths and weaknesses. Many

structures that appear strong may have walls which offer little protection. Particular attention is paid to strongly constructed buildings that have walls that provide protection from direct fire, and ceilings that will support the weight of the upper stories if they collapse. Buildings with few windows or doors and those built of nonflammable materials are noted for possible use. Likewise, buildings are checked for basements and fields of fire. Special consideration is given to buildings with adequate fields of fire and sufficient room sizes to permit the firing of antiarmour weapons with backblasts.

6.   Reconnaissance must also be conducted to find sewer locations, power sources, possible enemy infiltration routes, the number of civilians remaining in the area and the location of materials for preparing fighting positions and obstacles.

7.   The type of buildings and their construction must also be considered. Generally, core areas and the core periphery contain stronger, better constructed brick and heavily clad buildings. Depending on the type of buildings within the area and the size of the designated battle position, specific buildings and ground are selected and prepared for the defensive battle.

8.   Frontages for infantry forces will normally be:

   a. rifle platoon: one to two city blocks;

   b. combat team/company: two to four city blocks; and

   c. battle group/battalion: four to 12 city blocks.

9.   Strong points should not be restricted to one building which can be easily isolated and destroyed. Defensive strength can best be achieved by grouping a strong point around an intersection, with fire positions in two or three different buildings providing interlocking and mutually supporting fire. Strong points may be of platoon strength or, in large buildings, of company strength and may include tanks.

10.   Defended localities will normally be of at least company strength with section and platoon strong points grouped to form combat team defended localities. These localities will be sited in depth throughout the area and organized for all round defence so as to react to enemy infiltrations or movement between positions which could see enemy forces getting behind defended localities. Ideally, they should be sited so that penetration between strong points is virtually impossible. Boundaries between localities should be arranged so that the likely enemy lines of approach fall solely into the area of responsibility of one defended locality or another.

11.   Whenever possible, mutually supporting fire positions will be taken up outside the buildings, but buildings will have to be used in towns and cities unless bombardment has created areas of rubble which often provide better concealed and less vulnerable positions. Streets and open areas are the killing zones for both sides and must be avoided.

12.   Streets should be blocked and the blocks covered by fire from nearby houses or other vantage points. Small mobile reserves will be held centrally to help eject any enemy who has infiltrated into a defended locality. Fighting will be at short ranges, and once a firer is spotted, he can be easily neutralized. By occasionally changing his position he will be difficult to locate.

13.   The defence must be aggressive with the attackers harried by day and night. This can be achieved by re-infiltrating into buildings previously evacuated or captured, and by sniping and booby trapping buildings which cannot be occupied. Heavy casualties will reduce enemy morale and make soldiers careless. This is the time to hit back.

SUPPORTING ARMS AND WEAPONS

14.   **Artillery and Mortars**. White Phosphorous shells can be used effectively on enemy moving in the open. Fire support of this type can be close to friendly positions provided these are well protected with good overhead cover. Projectiles can be fused to explode inside

buildings. Harassing fire can be most valuable in disrupting enemy reinforcements and resupply.

15. **Tanks.** In defence, tanks are best employed with infantry as mobile reserves. They can move to previously prepared and reconnoitred positions in the normal way. They should not be used as static pillboxes, but can use buildings as fire positions. They should be assigned primary, secondary and alternate positions as well as primary and alternate sectors.

16. **Engineers and Assault Pioneers**. The tasks of the engineers and assault pioneers include:

   a.   demolitions,

   b.   mining and booby trapping,

   c.   strengthening strong points,

   d.   providing water for fire fighting, and

   e.   in the case of assault pioneers, providing a small infantry reserve.

17.   The preparation of a house or building as a strong point and the preparation of a village as a defended locality are well covered in B-GL-302-006/FP-001.

18. **Public Services.** Gas and electricity are dangerous - **and must be turned off.** Water should be left on. In particular, all possible containers should be filled, including baths. The lavatory should be kept working. As much of the house as possible should be soaked daily to reduce fire risks and the cellar should be flooded to 15 cm.

19.   **External Defences.** The commander must first select the arcs of fire. The preparation of the strong point will then consist of:

    a.   making fire ports where necessary;

    b.   removing useful items from all outbuildings then demolishing them to clear fields of fire. Tanks and APCs can assist with the demolition;

    c.   placing concertina wire around the outside of the house to prevent the attacker getting near enough to place pole charges. Anti-personnel mines should be placed in and around the wire;

    d.   considering fixing CLAYMORE mines to the walls covering the wire;

    e.   blocking, locking and nailing external doors. All glass should be removed;

    f.   removing all window glass and replacing it with wire netting. When time permits windows should be sandbagged, starting downstairs. One result of this is that rooms will be made dark, a disadvantage to an attacker coming in from the light; and

    g.   cutting down drain pipes, creepers and vines and so remove aids to climbing. If possible a drain pipe should be led inside to act as a water collector.

20.   **Internal Defences.** The defenders must undertake the following:

    a.   Build a small sandbag wall around the firing post giving protection against enemy grenades and enabling a defender to throw his own inside the room.

    b.   Remove floorboards underneath downstairs windows allowing an attacker forcing a window to fall through.

    c.   Block internal doors.

    d.   Cut mouseholes for communication.

    e.   Cut small holes in floors so that grenades can be dropped on an enemy below.

    f.   When all other work has been done, remove or block stairways. Movement thereafter should be via holes cut in the ceilings through which ladders or knotted ropes can be lowered.

    g.   lay wire and other obstacles inside rooms to slow down an attacker.

    h.   CLAYMORE mines can de detonated in vacated rooms.

21.   Unoccupied Houses. As these will have to be cleared by the enemy their task can be made more difficult by locking the entry point.

22.   **Dress and Equipment.** The minimum should be worn to allow unrestricted movement through mouseholes and trap doors. NBC kit, steel helmet, respirator, water and maximum ammunition must be carried, and ear defenders should be worn.

23. To save carrying all of the ammunition to the strong point a number of ammunition caches along known withdrawal routes would be useful.

LIMITED VISIBILITY ACTIONS

24. The enemy conducts the night attack to maintain the momentum of his daylight operations. The following defensive measures may be considered:

    a.   Defensive positions and crew-served weapons are shifted just before dark to deceive the enemy as to their exact location. A

section or fire team can often be shifted to an adjacent building and cover the same avenue of approach.

b. Unoccupied areas between units, which can be covered by observed fire during daylight, may have to be occupied or patrolled at night.

c. Radar, remote sensors and night observation devices are used in streets and open areas.

d. Nuisance mines, noise-making devices, low-wire entanglement and OPs are positioned on secondary avenues of approach for early warning.

e. Observation posts, preplanned indirect fire, patrols and antiintrusion devices are utilized to prevent infiltration.

f. Plans are prepared for artificial illumination.

g. Strict fire discipline to prevent disclosures of friendly positions is maintained.

h. Indirect fire weapons, grenade launchers and hand grenades should be used when defences are probed to avoid disclosure of defensive positions.

25. When the enemy begins his night assault, defensive fire is initiated by a prearranged signal. Crew-served weapons, tanks and individual riflemen fire within their assigned sectors. Grenades and command-detonated mines are used to supplement other fire as the enemy approaches the positions.

26. Moving back to daylight positions should be accomplished before first light. In fog, rain, or snowstorms, many of the techniques described for night defence apply. Radar and other sensors may, however, be degraded, necessitating the movement of daytime defensive positions closer to the avenue of approach. Greater reliance should also be placed on OPs and patrolling in these situations.

COMMAND AND CONTROL IN THE DEFENCE

27.   FIBUA places a heavy strain on command and control. Command of subordinate units and the control of fire is complicated by restrictive terrain, the proximity of opposing forces, reduced communications capabilities and the numerous small, isolated battles that may be fought simultaneously throughout the built-up area.

28.   The primary control measures used are boundaries, battle positions and sectors. Phase lines, junction points and restrictive fire control measures may also be used to simplify reporting and control.

29.   Timely and accurate situation reports are more critical to the commander in this environment. Distances between forces are reduced and an unreported breakthrough may splinter defensive cohesion and seriously jeopardize the entire defence. Commanders must constantly be informed of critical actions to enable rapid assessment and reaction. Commanders should be located well forward.

CHAPTER 12

FIGHTING IN WOODED AREAS

SECTION 1

INTRODUCTION

GENERAL

1.   Extensive forested areas are often associated with mountainous, or tropical countries where extreme seasonal climates are prevalent. North, Central and South America, Africa, and South East Asia are such areas. Combat in extensive forested areas and jungles is covered in B-GL-302-004/FP-001. This chapter will deal with the section and platoon in combat in wooded areas such as those prevalent in Europe and in developed parts of North America.

2.   Fighting in wooded areas is primarily a dismounted infantry function, with the main burden falling on rifle sections and platoons operating within a company framework.

TYPES OF WOODS

3.   Woods may vary in size from a copse to a large forest which extends for several kilometres in all directions. These large wooded areas have a profound effect on tactical planning.

4.   Wooded areas will vary considerably, depending on the type and size of the trees. Deciduous trees will obviously offer less concealment in winter than conifers.

5.   Young woods will often be dense, affording accessible cover from view for infantry but not for vehicles. They will be no obstacles to tanks but could severely impede the movement of dismounted infantry. They will also give little cover from fire, and visibility will be poor.

6.   Mature woods will be an obstacle to vehicles and will give cover from the air. Visibility, however, will be greater at ground level, and infantry will be able to move relatively freely.

7.   **Effects of Wooded Areas on Tactics.** Wooded areas have three main effect on tactics; they reduce visibility and fields of fire, they affect mobility and they provide some measure of concealment from the air.

REDUCED VISIBILITY AND FIELDS OF FIRE

8.   The extent of visibility and of fields of fire will vary according to the density of growth but can be as little as 20 metres. High ground will have reduced value for observation. Clearings, tracks and roads will be important for observation and fields of fire and their point of intersection will be particularly significant.

9.   Tanks are very vulnerable to infantry short range antiarmour weapons and the value of the tank gun itself in wooded areas will be limited. Tanks deployed within woodland will always need close infantry protection. The use of other long range direct fire weapons such as the GPMG (SF), MRAAW and LRAAW will be similarly limited. The SRAAW(H) and SRAAW(M) will be very important in the antiarmour plan.

10.   Indirect fire will be less effective as targets and also the locations of friendly forces will be difficult to identify. It will be difficult to direct or to adjust indirect fire support and the effects of shrapnel from shells exploding in -rees will be devastating to unprotected personnel.

11.   In a wooded area, the amount of terrain that a platoon can hold will be greatly reduced. In positional defence a platoon's frontage in a dense wood may only be some 60 metres.

MOBILITY

12.　　Wheeled vehicles will be confined to roads and clearings. APCs and light armoured vehicles will have some off-road mobility in lightly wooded areas. Although tanks will be able to push over medium sized trees, they will tend to get bellied up on rocks, uprising roots and stumps. Tanks and APCs will of choice use roads and tracks, only moving off them when tactically necessary. Tracks and roads may cause problems due to mud, dust, ice and snow depending on the season of the year. These limitations make these vehicles vulnerable to ambush.

13.　　In these circumstances the defence may turn a wooded area into a formidable obstacle forcing the attacker to use existing roads and tracks to achieve any speed.

14.　　Wooded areas should not be considered an obstacle to dismounted infantry but thick underbrush and the density of young trees may slow them down. Navigation will be more difficult and infantry moving on foot will need to rely more on navigation aids. For the defending force, it will be very difficult to prevent infiltration without a large defence force.

COVER AND CONCEALMENT

15.　　Cover afforded by the canopy of foliage will vary according to the types of trees and the season; nevertheless it will usually provide a significant measure of protection from view. Accordingly infantry moving on foot can exploit the advantage of surprise which this cover gives them. Conversely, the defender can hide reserves, HQs and administrative areas from aerial view and conceal the movement of counter-attack forces.

16.　　Wooded areas generally provide poor protection against IR and thermal surveillance devices. Commanders must guard against the false sense of security which they may have when in wooded areas, when facing an enemy equipped with near infra-red surveillance devices.

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SECTION 2

DEFENCE

1.　　　The main factors influencing the choice of defensive tactics in wooded terrain are similar to defensive tactics discussed previously. The enemy, strong in armour, will strive to advance quickly and avoid wooded areas. Defending in wooded areas also requires troops to divert the enemy towards the woods and then stop his progress through it. This can be expensive in numbers of troops.

2.　　　Standard defensive tactics are based on combat team defended localities. In such a case, the tactics explained in chapter 7 will prevail. Should the geography be such that the enemy must pass through heavily forested areas as it could well be the case in certain parts of the world, the concept explained hereafter may well be adopted. **IT MUST BE STRESSED THAT THE FOLLOWING TACTICS ARE BUT A CONCEPT OF DEFENCE; HOWEVER, AT THE PLATOON AND SECTION LEVELS, THE TACTICS WILL PROVE TO BE OF UTMOST USE IN ANY TYPE OF DELAYING TASKS AND SHOULD BE CONSIDERED IN THAT LIGHT.**

3.　　　Troops employed in delaying the enemy advance through wooded areas must make the woodland as formidable an obstacle as engineer and assault pioneer resources will allow and deploy a few fighting patrols/ ambushes into key areas.

4.　　　Fighting patrols may further delay the enemy by falling back through a series of intermediate ambushes to one strongly defended position from which the battle will be fought. These fighting patrols will usually be of platoon size although company fighting patrols may also deploy.

5.　　　This type of defense envisages:

　　a.　　a number of Observation Posts (OPs) sited forward of the wood;

b. the forward edge is normally left undefended, as troops there could be extremely vulnerable to both direct and indirect enemy fire;

c. a number of roads and tracks being left clear in the wood itself for the enemy to advance. These routes will all lead to the main defensive position which will be sited well back in the wood and concealed from both ground and air observation. All other roads and tracks will be blocked by felling trees, by cratering and by mines;

d. the defender armed with SRAAW(H) and **SRAAW(M)** successively ambushing the enemy along the routes left open and eventually falling back to the main position; and

e. antiarmour weapons deployed both within the main defensive position in the wood and forward of the defensive position to cover certain key tracks and junctions.

OBSERVATION POSTS

6.   OPs are provided by the reconnaissance platoon which deploys a screen, but rifle companies may also be tasked. OPs are sited forward of the wood. They are well concealed and have overhead protection. The assessment of troops to tasks is likely to result in the necessity to man many OPs with soldiers drawn from infantry sections. Only some of these OPs will be manned by specialist MFCs or FOOs trained to direct mortar or artillery fire. The remainder contains at least one soldier capable of directing indirect fire. OPs report the advance of the enemy towards the wood and on which routes he is advancing. OPs remain until the enemy launches his main attack in regimental strength before withdrawing along reconnoitred routes back into the main defensive position.

OBSTACLES

7.   Many of the routes through the wood are blocked because there are insufficient troops to ambush every route. It follows that these obstacles must be substantial to prevent the enemy from clearing them easily. Engineer and assault pioneer advice must be sought but much of the work will have to be done by rifle platoons. The block is based on felled trees or craters, but is reinforced by antipersonnel and antitank mines to deter enemy engineers. Other routes are left more or less clear to encourage the enemy to use them. These are ambushed and it may be necessary to construct a small obstacle or lay a pattern of mines to stop the leading enemy vehicle. Low wire entanglements are particularly effective in woods to impede infantry.

AMBUSHES

8.   Ambushes are laid between the forward edge of the wood and the main defensive position. These are sited along the routes selected to be left open to the enemy. Ideally they are of platoon strength but may well be a section only. In both circumstances a reserve is essential to help extricate ambush parties and to deal with any enemy infiltration.

9.   The prime weapons in the ambush are the platoon **SRAAW (H), SRAAW(M) and GPMGs.** The lead vehicle must be knocked out thereby blocking the route. As the enemy attempts to deploy, other weapons are used.

10.   The ambush withdraws after perhaps only a short engagement to a further reconnoitred and prepared position. However, this tactic will need to be varied otherwise the enemy will learn merely to press on. At naturally strong positions a longer and more aggressive delay can be imposed.

11.   The withdrawal of the ambush is covered by fire. Indirect fire must be available and is called for by the ambush commander. Such fire is coordinated closely by the platoon commander because of the danger to other ambush parties. The enemy may react quickly to an ambush and there is a need for some form of obstacle as a back up in

case the leading enemy vehicle is not hit or following vehicles are able to bypass it. Such an obstacle could be constructed of mines and/or felled trees.

12.   Enemy infantry are the main threat. Ambushes must have means of warning of their approach. In the event of a major infantry attack, ambush parties have no option but to withdraw to the main position. Chapter 9 explains ambushes and road blocks.

WITHDRAWAL INTO THE MAIN BATTLE POSITION

13.   The withdrawal of ambush parties into the main position will be a critical phase of the battle as ambush parties may be closely pursued. The following points should be given particular attention:

   a.   A fire plan must be made to cover the withdrawal. This could be based on the GPMG (SF).

   b.   The main position must be fully prepared, including overhead protection.

   c.   Ammunition must be stockpiled in trenches for immediate use.

   d.   The main position is manned throughout, at least on a skeleton basis.

THE MAIN POSITION

14.   The main position is sited on ground of tactical importance and will include such areas as track and road junctions or obstacles on the enemy's approaches, e.g., rivers or streams, exits from defiles or valleys, high ground or open spaces from which the approaches can be dominated. Sections and platoons are mutually supporting but it is rare to achieve mutual support between combat teams.

15.   All the routes left open to the enemy are ambushed and will lead to the main position. It is here that the final stage of the defence of the woods is fought. This position is as strong as possible and

includes mines, low wire entanglements and carefully planned interlocking arcs of fire. Fire trenches have overhead protection. It is often necessary to clear fields of fire.

COMMAND AND CONTROL

16.   Each open route may be allocated to one ambush party which will fall back on every ensuing ambush position by moving parallel to it. Alternatively two or more ambush parties may leap-frog each other on the same route. In either case, speed of movement between ambush positions will be critical, necessitating a detailed knowledge of withdrawal routes off main tracks and the capability to report progress. In a leap-frog withdrawal the operation mechanics are fundamentally more complex.

17.   Overall coordination of ambushes must be exerted centrally by company/combat team commanders to ensure delaying action is coordinated across all routes and to avoid the bypassing of individual ambushes, which could precipitate an enemy breakthrough to the main position. Conflicting with this requirement is the critical timing of withdrawal by individual ambushes after contact; this decision can be taken only by the ambush commander on the spot.

18.   Decentralized command and control are essential. Radio communications might not be reliable and redundant communication systems will have to be developed, e.g., lines, command APCs to provide rebroadcast facilities, runners, etc., will all have to be considered.

19.   A thorough communications reconnaissance and plan must be made during the preparatory phase. If communications fail, all parties must be prepared to carry on their tasks in accordance with the commander's intent.

RECONNAISSANCE AND PREPARATION

20.   The defense of a wood requires much work. The main position must be sited in the same way as for conventional defence. The siting

and digging of the ambush positions and the preparation of obstacles on the blocked tracks and roads within the wood must also be completed.

21.   In a wood where each section has several ambush sites to reconnoitre and prepare in addition to the main defensive position, between 36 and 48 hours will be required to prepare the defended localities and the ambush sites.

22.   **Reconnaissance.** Commanders must reconnoitre all routes and selected ambush positions in their area. It is the only effective way of ensuring that all routes that may be accessible to the enemy are either ambushed or blocked.

23.   It will be most important to obtain a general mental picture of the layout of the forest, keeping in mind the need of the defenders to move as fast as possible between ambush positions. The platoon commander must prepare a sketch map of his area as this and air photographs will be used more than maps.

24.   The initial reconnaissance could well take several hours for the platoon commander. He will have to decide on:

   a.   The method of making selected tracks impassable. The enemy must not be able to bypass the block except by using another track which is ambushed.

   b.   Ambush position which should be sited in defilade if possible. Obvious sites such as track junctions should be avoided.

   c.   The killing zone of the ambush which must be such that a knocked out vehicle cannot be bypassed.

   d.   Good withdrawal routes for the ambush parties.

   e.   The main defensive position.

f.	The **OPs** positions forward of the wood and their withdrawal routes.

g.	The best methods for communications.

25.	**Preparation.** In order to avoid the much increased risk of air burst caused by woodland, preparation of ambush positions should include time to dig trenches with overhead protection. At the main position, overhead protection must be provided. The list of tasks is given below, but the priority will vary according to the situation:

a.	reconnaissance,

b.	preparation of main position and forward OPs,

c.	blocking of routes,

d.	initial preparation of ambush positions,

e.	further improvement of obstacles by minelaying, wiring, etc, and

f.	further digging of ambush positions and provisions of a "fail safe" obstacle at each.

26.	**Timings.** Timings will depend on the type of ground, availability of resources, the tactical situation, whether work is possible by day and the manpower available. Possible minimum timings for the following activity are:

a.	preparation of main position (to include overhead protection and surface laying of protective minefields), 24 hours;

b.	as above plus two ambush positions per section, 36 hours; and

c.	as above plus several ambush positions per section, 48 hours.

TANKS

27.   In woods, tanks are unlikely to play a major role. However, particular situations may sometimes permit the use of tanks at worthwhile ranges, such as down a straight road or over a wide clearing. Where this applies, tanks must always have close infantry protection.

28.   Tanks should be used in a supporting role beyond the periphery of woodland. Tasks will be:

   a.   to prevent any bypassing attempt;

   b.   to engage the enemy advancing to break into the woodland; and

   c.   to stop a possible enemy breakout from the woodland and attempts to outflank the defence.

ARTILLERY

29.   During the initial phase, FOOs will usually be deployed forward of woodland where they can direct fire most effectively on to advancing enemy. Subsequently, when the extent of the enemy's advance forces them to withdraw, they may be able to take up one or more intermediate OPs before falling back finally to the main position.

30.   Visibility and communications permitting, there is value in FOOs remaining as far forward as possible within woodland so that they may direct harassing fire along tracks and Final Protective Fire (FPF) to assist ambush parties in making a clean break. The advantages of this course need to be weighed against the chance of FOOs being isolated by encirclement or penetration, especially by dismounted enemy infantry.

ENGINEERS/ASSAULT PIONEERS

31.   Engineer and assault pioneer advice are vital in creating the major obstacles required. Physical assistance in the form of engineer plant and stores may well be essential in order to complete obstacles and digging on time. Nevertheless, rifle platoons must know how to fell trees using saws and explosives and how to lay both antitank and antipersonnel mines.

MINEFIELDS

32.   The priority for laying mines is the main defensive position. The laying of mines and the antitank plan have to be closely coordinated. There may be little value in laying protective minefields forward of the woods as they will not be covered by direct fire. Greater effect will be achieved by laying a mixed minefield inside the forward edges of the wood.

33.   There will be a requirement for mixed mining in the ambush positions. Antipersonnel mines will be used in likely dismounting areas while antitank mines nearer the ambush position will discourage enemy from following up hard.

MECHANIZED INFANTRY

34.   APCs with a turret mounted GPMG may be integrated into the defensive fire plan at the main position. APCs could be grouped in a ZULU harbour. Some additional considerations are:

a.   **Communications.** In woodland, communications will tend to be tenuous, yet the need to maintain continuous radio communication, especially once ambush parties have made contact, may be an even higher priority than usual. The use of the more powerful mounted radio sets over man-pack radios must be considered.

b.   **Casualties**. APC ambulances sited within combat teams' main defended localities could improve first aid treatment and speed the medical evacuation of casualties.

c.   **Ammunition.** Section vehicles held securely and readily available within woodland and loaded with a proportion of first line ammunition, could ease the resupply of ambush parties.

d.   **NBC**. During the preparatory phase of the defence, the close proximity of APCs increases NBC protection.

e.   **Noise**. Sporadic starting of engines for whatever purpose is likely to prejudice concealment and undermine surprise.

f.   **Extrication.** Should it become necessary to withdraw from the main defensive position, the extrication of APCs would present a major complication, especially if withdrawal is executed while in contact with the enemy.

SECTION 3

WOODS CLEARING

INTRODUCTION

1.   **Tasks**. A wooded area forming part of a enemy defensive position is attacked using normal offensive drills and tactics (see Chapters 5 and 6) . The scope of this section is confined to small woods and isolated areas of natural cover, such as will be found in mixed terrain. A rifle platoon may be tasked to clear such areas in the following situations:

   a.   to protect the combat team armour when moving through wooded areas;

   b.   to clear a planned hide or battle position before occupying it;

   c.   to conduct counter infiltration operations; and

   d.   to sweep an area of enemies who are withdrawing or have been cut off.

2.   Threat. The level of enemy that may be anticipated in this context is:

   a.   a standing patrol,

   b.   a reconnaissance patrol lying up,

   c.   a patrol base,

   d.   a small enemy force which has been cut off,

   e.   part of a larger enemy force which is attempting to infiltrate, or

   f.   rews of destroyed/damaged enemy AFVs.

3.   Such opposition may well be dug in and very well concealed, or may be in hastily prepared positions. Its aim may be to remain concealed or to defend itself aggressively. Especially in the latter case, its deployment throughout the wood/natural cover could range from single snipers to section ambushes/positions concealed at, under or above ground level. The possible presence of a tank or APC cannot be discounted.

PLANNING

4.   Once the general position of the enemy is located, speed and thoroughness of searching are essential to destroy him, or prevent him from escaping. The platoon commander should consider the following factors when planning a woods clearing operation:

a.   **Speed.** This is vital both in planning and in execution. A well rehearsed drill which requires a minimum of orders and reorganization of sections must be used to achieve the necessary speed. This drill will include the preliminary action of covering all possible enemy lines of withdrawal.

b.   **Thoroughness.** The thickness of the cover will effect the distance between searchers. The maximum distance in a thick wood would be six metres between soldiers. The distance can be augmented if the thickness of the wood permits. If the wood cannot be cleared in one sweep, plans must be made to prevent the enemy from moving from an uncleared area to a cleared area of the wood.

c.   **Direction**. If the choice of direction is not dictated by the location of the enemy or the shape of the wood, it is easier to clear downhill and to make the enemy retreat in the direction of his own lines or along his chosen withdrawal route.

d.   **Killing Zone.** The platoon should try to drive the enemy into a good killing zone outside the woods. This will be an open area where the GPMGs can be used to the best effect.

ORGANIZATION

5.　　　The platoon will normally be divided as follows:

a.　**Cut Off Group**. Usually composed of the weapons detachment, augmented as necessary by section LMGs or APCs. It is commanded by the platoon second in command.

b.　**Sweep Group**. Composed of one or two sections, commanded by the platoon commander (or section commander if only one section).

c.　**Assault Group**. Composed of the remaining sections, plus any attached specialist groups such as assault pioneers or combat engineers. If the assault group consists of two sections, it will be commanded by the platoon commander.

6.　　　If APCs are available they can be used either with the cut off group, or to provide fire support for the sweep and assault groups.

PLATOON WOOD CLEARING DRILL

7.　　　The sequence of action for clearing a small wood is as follows:

a.　planning and preparation,

b.　deployment of cut off group(s),

c.　gaining a lodgement,

d.　sweeping the wood,

e.　action on meeting enemy, and

f.　consolidation.

PLANNING AND PREPARATION

8.   The platoon commander must first complete a quick reconnaissance from a position from which he can see the woods. In making his estimate, he will draw conclusions concerning the following:

    a.   likely enemy lines of withdrawal,

    b.   shape of the woods and which direction to clear it,

    c.   possible killing zones,

    d.   positions for cut off groups,

    e.   wind, if smoke is to be used, and

    f.   larger woods with wide roads or fire breaks can be cleared segment by segment using the roads as killing zones.

9.   While the platoon commander is completing his battle procedure, the platoon second in command reorganizes the platoon as already described.

DEPLOYMENT OF THE CUT OFF GROUP

10.   The cut off groups under the platoon second in command will move into concealed positions using covered approaches, to cover all exits from the woods (chosen killing zones). They must move at best speed consistent with security. Providing all cut off groups can be positioned quickly and more or less simultaneously, loss of surprise may not be critical. A security team can deploy on the exposed flank to guard against their being attacked while covering the chosen killing zone. They engage anyone emerging from the woods before the success signal is given.

GAINING A LODGEMENT

11.   The remainder of the platoon will use fire and movement to gain the edge of the woods. If the edge is defended, it must first be captured by a deliberate or quick attack. A typical woods clearing deployment is illustrated in Figure 12-3-1.

12.   Once the platoon has secured the leading edge of the wood, it reorganizes into the sweep and the assault groups. The sweep group forms an extended line across the front of the platoon. The flanks of the sweep group should be just inside the edges of the woods. The assault group remains a tactical bound behind in the centre, ready to attack from either flank. It can be as little as 15 - 20 metres, depending upon the thickness of the wood.

SWEEPING THE WOODS

13.   When the order to advance is given, the sweep group moves forward. Depending on the ground and the threat, the group advances by teams using fire and movement. The leading soldier searches the ground in front carefully, paying particular attention to thick undergrowth. The team partner observes and listens intently, looking up into the trees as well as forward and sideways.

14.   The assault group focuses upward on trees that could hide enemy snipers or directional mines, as well as checking to the rear. Particular points to note are:

a.   The pace must be that of the slowest pair, which will probably be the one moving through the thickest undergrowth.

b.   If the sweep group has to halt, all take fire positions and observe and listen. The ground already cleared is kept under observation by the assault group.

c.   The sweep groups on the two flanks must indicate progress to the cut off groups by hand signal, taking care not to expose themselves outside the wood.

d. When the sweep group reaches the far end of the wood it must not under any circumstances emerge from it until the success or all clear signal is given to the cut off groups.

e. The assault group should follow 10-15 metres behind the sweep.

15. It is important that all movement is as silent as possible, no less for the purpose of detecting the enemy as for avoiding detection by the enemy.
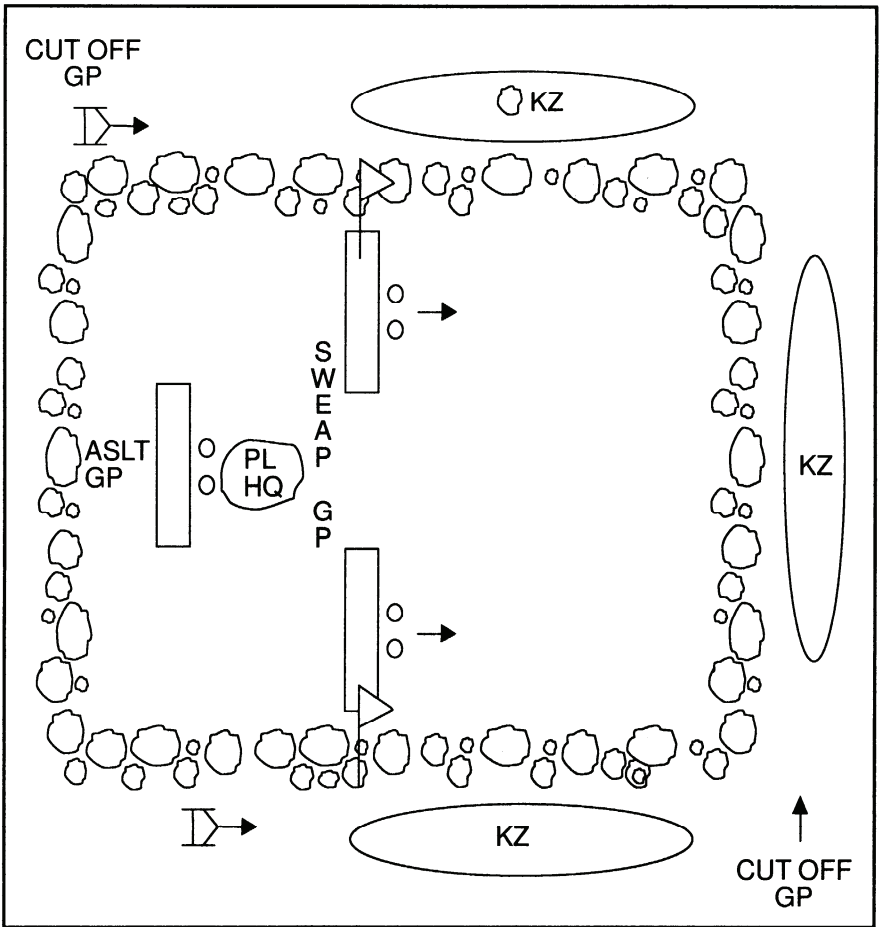
Figure 12-3-1 Typical Woods Clearing Deployment

ACTION ON MEETING THE ENEMY

16.   Range and control are two constant considerations which govern the action to be taken when meeting with the enemy. If the enemy attempts to delay or harass the advance by firing and withdrawing, the platoon commander may consider ordering the sweep

sections **to advance by fire and** movement, usually at fire team or group level, if this is not already being done. Two examples of generally correct actions upon contact are:

a. If only one team in the line of sweeps is effectively engaged at very close range, they should rush the enemy, returning fire simultaneously. Having dealt with the enemy they must take cover on a line with its position, shout "Clear" and continue to observe. Meanwhile the remainder of the sweep teams and the assault group not brought under effective fire take immediate cover and continue observing in their allotted arcs. On hearing "Clear", the platoon commander will order the advance to continue and the line of sweeps will pick up the pair who dealt with the enemy as it passes through;

b. If the enemy opens fire at a range of about 30 metres, the whole line of sweeps should take cover and those who can see the enemy should return fire as usual. The assault group commander rejoins the platoon commander and they move to where they can see. The platoon commander will order the assault group to attack or take command and execute a platoon attack depending upon his estimate of the situation.

17.   The assault group attacks from the centre towards one of the flanks, in an attempt to push the enemy out of the woods into the killing zone. For a large position, however, it may be forced to move to a flank and attack across the front of the sweep group. See Figure 12-3-2 for an example of a platoon assault.

18. These examples represent the extremes of possible enemy options. There are many other permutations, but in all circumstances, the platoon commander must:

a. resist the dislocation of his sweeps;

b. limit each objective;

c.   employ the assault group against the farthest enemy positions; and

d.   ensure that constant observation is maintained.
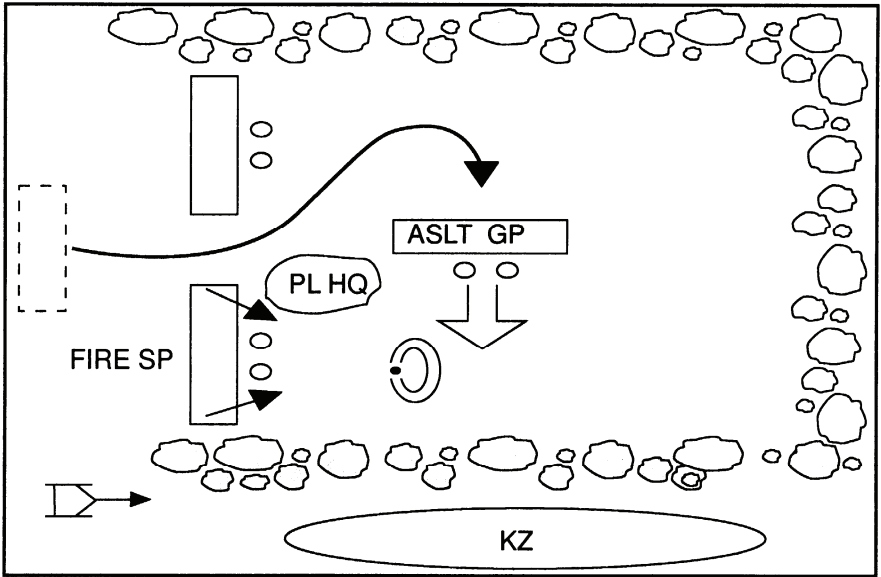
Figure 12-3-2 Platoon Assault During A Woods Clearing Operation

CONSOLIDATION

19.   Other points to note are:

a.   when advancing, the directions) in which the sweep group and assault groups may fire must be controlled to minimize the chance of fratricide.

b.   grenades are used only if they can be thrown accurately into a hole or hollow and nearby soldiers are under cover. They can easily bounce back off trees.

c.   wounded and prisoners are to be handed over to the assault group.

20.   Consolidation. When the sweep group reaches and clears the far end of the wood, the success signal is given. The platoon will then consolidate at a pre-arranged RV as follows:

a.   all the soldiers in the wood move to the RV under the platoon commander, covered by the cut off group;

b.   the cut off group then rejoins the platoon at the RV;

c.   the platoon second in command coordinates the treatment and evacuation of casualties and prisoners and the redistribution of ammunition if necessary; and

d.   the platoon commander sends a report by radio to the company/combat team commander.

MECHANIZED INFANTRY

21.   **APCs.** A mechanized platoon cannot clear a small wood or an area of natural cover. Troops must dismount and clear the wood on foot. Some suggested uses of the APC are listed below:

a.   The troops may remain mounted during the platoon's initial deployment up to and around the wood, when speed is more important than surprise.

b.   APCs manned by a driver and vehicle gunner can be used as cut off group, thus releasing more soldiers and possibly more GPMGs to the sweep and assault groups. However, the relative vulnerability of APCs deployed in this mode must be carefully weighed.

c.   When it is necessary to gain a lodgement from the forming up place, APC turret/vehicle mounted GPMGs can provide additional covering fire.

d.   APCs can be used for casualty evacuation if necessary.

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CHAPTER 13

ALL ARMS COOPERATION

INTRODUCTION

1.   Cooperation is the basis of all successful combined operations. It is founded on mutual understanding and respect. This is fostered by establishing permanent affiliations between infantry, armour, engineer and artillery units.

DEFINITIONS

2.   Battle Group. A battle group is an operational grouping consisting of either a tank regiment with at least one infantry company, or of an infantry battalion with at least one tank squadron, to which is allocated elements of other arms and services according to need.

3.   Combat Team. An operational group normally consisting of an infantry company and a tank squadron with elements of other arms and services allocated according to need. Combat teams combine firepower, mobility, protection, flexibility and communications in a force which is capable of conducting operations in all types of operations of war, and in all but the most exceptional conditions of terrain and climate.

4.   Command Relationships. Authorized command relationships for grouping which may affect the platoon or section commander are:

  a.   Under Command. A command relationship which gives the gaining commander full authority to direct and control all aspects of the operational activities and all movement of the element and, unless specifically excluded, the authority to direct and responsibility for the combat service support of the "under command" unit or sub-unit. The commander may assign missions or tasks to the entire unit or to its component elements. He may delegate all or any part of his authority for the "under command" unit to a sub-unit commander.

b. **In Support.** A command relationship which gives to the gaining commander authority to control the **operational** capability of a supporting element but no authority or responsibility for its other functions.

c. **In Location**. Forces deployed "in location" are executing tasks assigned by a higher headquarters. The commander is responsible for the coordination necessary to accommodate the "in location" elements in his area.

5.   **Artillery Tactical Tasks.** When an artillery unit or sub-unit is assigned a tactical task in direct support of a battalion / battle group, it will provide a FSCC and F00 parties.

ARMOUR

6.   **Role.** The role of armour is to defeat the enemy through the aggressive use of firepower and battlefield mobility. Specific tasks include:

a. covering force operations,

b. forming part of the leading elements in the advance,

c. counter-movement operations,

d. assaulting and destroying the enemy, especially enemy armour,

e. penetrating, exploiting and conducting pursuit operations, and

f. antiarmour support to infantry.

7.   **Characteristics**. The tactical characteristics of tanks are:

a. **Firepower**. The main armament and co-axial machine gun can provide accurate aimed direct fire in close support of infantry.

b. **Protection**. Tanks offer firepower and great agility while still surviving against glancing enemy antitank fire. They are the only fighting vehicles able to move about the battlefield with relative impunity to all but direct antitank fire.

c. **Mobility**. The cross-country agility of the tank enables its crew to regroup and move rapidly about the battlefield. This characteristic makes armour ideal for counter-movement operations.

d. **Flexibility**. Flexibility stems from mobility and communications, which enable a commander to concentrate and disperse and to shift the point of attack quickly.

8. **Limitations**. Tanks are subject to the following limitations:

a. **Air Attack**. Tanks are extremely vulnerable to air attack.

b. **Logistic Support and Servicing**. Tanks need large amounts of fuel and ammunition. The provision of adequate time for replenishment and maintenance must be considered in planning.

c. **Vulnerability in Close Quarter Fighting.** In woods, or in built-up areas, tanks are vulnerable to enemy short range antiarmour weapons. Supporting infantry and well-developed defile drills are necessary.

d. **Difficulty in Holding Ground**. Tanks require infantry support to hold ground for extended periods.

e. **Sensitivity to Obstacles**. Rugged topography, close country, and artificial or natural obstacles may limit the deployment of tanks. Despite these difficulties, tanks can achieve surprise by advancing through apparently impassable terrain, with or without engineer assistance.

f.   **Size, Weight and Noise.** Size and weight may affect a tactical plan by ruling out certain routes and vehicle noise can preclude surprise. Skilful driving or the use of a cover plan will reduce this limitation.

9.   **Mutual Support.** When working together, infantry and tanks must assist each other as follows:

a.   Armour supports infantry by providing direct fire to neutralize weapons, hard-point targets and enemy tanks. In the attack, they may precede, accompany and/or give fire support to the infantry onto the objective and participate in the consolidation stage. In defence, they provide close fire support, antiarmour fire and a mobile reserve.

b.   Infantry supports armour by destroying enemy short and medium range antiarmour weapons and their crews. They complete the destruction of enemy emplacements temporarily neutralized by armour. They can provide a firm base for the manoeuvre of the armoured force and provide it with close protection in periods of reduced visibility and in close country or towns.

10.   **Carriage of Infantry on Tanks.** There will be occasions when it is desirable to move dismounted infantry on tanks. When this option is chosen, commanders must remember:

a.   the leading tanks do not carry infantry;

b.   the infantry have no protection from the enemy direct and indirect fire that the tanks may draw; and

c.   the traversing of the turret and arcs of the tank weapons will be restricted.

11.   **Communications with the tank crews**. The platoon commander, section commanders and any soldier can communicate with the tank crew by the following means:

   a.   **Radio**. Tanks remain on the squadron domestic net, with a second radio on the combat team net.

   b.   **Tank Telephone.** This permits any soldier on the ground to speak to the tank commander for target indication.

   c.   **Visual Signals**. These must be pre-arranged.

ARTILLERY

12.   **Role**. The role of the field artillery is to assist in the defeat of the enemy by indirect fire. The aim is to establish such fire supremacy that the enemy can neither interfere with the battalion operations nor effectively develop his own.

13.   Tasks. Indirect fire tasks in support of the battle group include:

   a.   fire plans in support of offensive operations,

   b.   defensive fire plans,

   c.   engagement of opportunity targets, and

   d.   provision of smoke and illumination.

14.   **Tactical employment considerations**. The platoon commander will not be required to coordinate fire plans. This will be done by the Fire Support Coordination Centre (FSCC). The platoon commander and the section commanders will, however, be required to call for and adjust indirect fire. When they do so, they must strive for:

   a.   **Surprise**. This may be achieved through the speedy and accurate delivery of a heavy weight of fire. This will increase

the casualties caused and obtain a greater and more lasting neutralization.

b. **Concentration**. Indirect fire should be concentrated in time and space for best result.

c. **Flexibility.** Fire planning must be simple to ensure flexibility.

d. **Economy.** The fire of the artillery and mortars should be fully integrated. This will be coordinated at the Fire Support Coordination Centre.

15. **Organization.** The field artillery regiment has four gun batteries. Each battery consists of a battery headquarters which provides the FSCC, four F00 parties and six guns.

16. Usually the battalion will be allocated a battery commander (BC) and F00 parties. In certain cases, F00 parties could be allocated only for a specific operation.

17. **Fire planning.** Artillery fire planning is defined as the process of allocating available fire to support the tactical or movement plan. A fire plan must provide both timely and effective fire.

18. There are two main categories of fire plan - deliberate and quick. That which concerns the section and platoon commander is the quick fire plan. Such plans involve from one battery to all available artillery. The essential difference between a deliberate and quick fire plan is that in a quick fire plan the artillery officer doing the detailed planning with the supported arms commander sends his orders directly to the guns concerned.

19. **Responsibilities.** The responsibility for making a fire plan rests with the commander making the tactical plan. This applies regardless of the level of command. When preparing a fire plan with the artillery advisor, the supported arms commander must state:

a. what the fire plan is to achieve;

b.   where fire is required;

c.   when fire is required and for how long; and

d.   what type of fire is required.

The artillery adviser will advise on these points and then prepare a detailed plan. The use of all available fire support, including battalion support weapons, must be considered.

20.   **Smoke screen.** If the platoon commander requires a smoke screen, additional information must be given to the artillery officer i.e.:

a.   the area to be blinded or the area to be screened;

b.   the time at which the screen is to be effective (smoke must be fired before the screen is to be effective to allow the smoke to build up);

c.   the duration of the screen; and

d.   whether testers are allowed.

21.   **Coordination.** At the battalion headquarters, the FSCC consists of:

a.   BC's party;

b.   mortar platoon headquarters;

c.   air defence resources; and

d.   a tactical air control party (TACP), if allocated.

22.   **Ammunition**. The field battery is capable of firing several types of ammunition:

a. **High Explosive**. High explosive rounds are used to neutralize targets. The round can be set to detonate as an air burst, on impact or after impact.

b. **Illumination.** Illumination can be provided by the artillery. One round of 155mm will illuminate an area 1000 metres in diameter with one million candlepower for two minutes. A round of 105mm will illuminate an area of 800 metres for one minute.

c. **Smoke**:

   (1) **Hexachloroethane (Base ejection shell (BE shell)).** This is used primarily to build a smoke screen.

   (2) **White Phosphorous (WP)**. This material inflames spontaneously on contact with air. It is not as effective as hexachloroethane at producing a smoke screen as it tends to rise in columns, however, it is casualty producing.

d. **Improved Conventional Munitions**. These projectiles deliver high explosive shaped charge grenades. There are 88 grenades per projectile. At 500 metres above ground, the grenades are hurled out through the base of the projectile. A ribbon streamer attached to the grenade arms and stabilizes it. Upon impact the grenade explodes. The shaped charge is very effective against material and personnel.

e. **Family of Scatterable Mines**. These projectiles deliver antiarmour and antipersonnel mines;

   (1) **Area Denial Artillery Munitions**. Each projectile contains 36 antipersonnel mines ejected over a target area. On the ground, seven sensor lines deploy up to six metres from the mine. Disturbance of a trip line activates the mine which

thrusts a kill mechanism 0.5 to 2.5 metres in the air. On detonation, approximately six hundred steel fragments are projected in all directions. The mine will self-destruct at a predetermined time.

(2) **Remote Antiarmour Mines System**. Each projectile contains nine antiarmour mines that can be expelled in the target area. Some mines contain anti-disturbance devices. The mines self-destruct at a predetermined time.

f. **Antipersonnel Projectiles.** A canister shot containing a number of metal fragments is available for short range direct fire against personnel.

g. **Antiarmour Projectiles.** Hexachloroethane Squash Head and High Explosive Plastic projectiles are used as direct fire rounds against armour.

23.   **Fire Control.** Artillery fire is normally controlled by an artillery Forward Observation Officer with direct communication to the guns. Fire Controllers from the mortar platoon can control artillery fire through the Fire Support Coordination Centre. Every platoon and section commander must know how to control artillery fire using adjustment of artillery fire procedure, in the event that a Forward Observation Officer or Fire Controller is not available.

ENGINEERS

24.   **Role**. The role of combat engineers is to assist troops to live, move and fight on the battlefield and to deny the same ability to the enemy. Engineers may be employed as infantry when required, although this is a waste of their speciality skills.

25.   **Tasks**. Field engineers have four major tasks:

a. **Maintenance of Mobility**:

(1)   filling craters, removing blowdown, clearing abatis and breaching antitank ditches;

(2)   breaching minefields and finding bypasses around nuisance mined areas;

(3)   providing bridges, ferries and boats;

(4)   maintaining and improving roads, fords and crossing sites;

(5)   clearing booby traps and supporting Explosive Ordnance Disposal operations; and

(6)   clearing debris, barricades and rubble within cities in support of fighting in built up area operations.

b. **Denial of Enemy Mobility:**

(1)   route denial;

(2)   creation and improvement of obstacles and barriers such as anti-tank ditches, minefields, bridge demolitions, road craters, abatis, rubble, mining and the demolition of utilities or facilities.

c. **Survivability**:

(1)   development of field defences;

(2)   reinforcement of strong points and observation posts;

(3)   advice and assistance in concealment, counter surveillance

(4)   deception plan tasks;

(5) advice and assistance in the construction of wire obstacles; and

(6) reinforcement of positions in built up areas and wooded areas, improving observation and fields of fire, and developing passive obstacles.

d. **General Engineer Support:**

(1) provision of water,

(2) support to area decontamination operations, and

(3) provision of engineer intelligence.

26. **Cooperation.** There will always be parties of engineers working in the forward areas. Whenever an engineer party is in the company area, commanders should make contact with it, exchange information with its commander, and give any assistance requested.

27. The work of Combat Engineers can contribute enormously to the success of the ongoing operation. As there are seldom sufficient engineers to carry out all the tasks required of them, higher commanders have to allot priorities. Infantry commanders can help a great deal by promptly passing back accurate engineer information such as:

a. state of roads, tracks and bridges (good as well as bad),

b. types and location of mines encountered,

c. width of streams, canals and other obstacles, and

d. local availability of engineer stores and material like timber, steel, stone, gravel and sand.

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CHAPTER 14

ADMINISTRATION IN THE FIELD

SECTION 1

INTRODUCTION

PLATOON AND SECTION COMMANDERS' RESPONSIBILITIES

1.   **General.** Platoon and section commanders have specific responsibilities for the administration and morale of their personnel, both in garrison and in the field. They must remember that although they may delegate certain routine administrative tasks to their second in command, they can never delegate their responsibilities. This implies that they must supervise the execution of all delegated tasks, and accept responsibility for their success or failure.

2.   **Platoon Records.** Regardless of the system of books and records that the company office keeps, it is essential that the platoon commander maintain a personal book containing detailed information that will allow him to appreciate the capabilities and limitations of each soldier.

3.   The platoon commander's book should contain the bare essentials for use in garrison and in the field. It must not be a substitute for the Unit Employment Record, the CF 490 and other company records but a convenient aide-mémoire for the platoon commander.

4.   The following headings are the minimum required and may be augmented to meet the need:

    a. **Essential Headings**:

      (1) service number, rank, name and initials,

      (2) address,

(3)   date of birth, religion and blood group,

(4)   next of kin (the information is contained in CF 742 - Personal Emergency Notification), and basic details concerning his dependants,

(5)   basic service information i.e., language capabilities, education, short summary of service highlights, important non service qualifications, service statistics, etc. (CF 490 contains most of this information),

(6)   date of last promotion and date of entry into the next promotion zone,

(7)   pertinent military qualifications and required qualifications for career progression,

(8)   important medical considerations that could affect employment, and

(9)   personal equipment and clothing information.

b.   **Additional Headings:**

(1)   weapon number,

(2)   radiation dosage (if pertinent to the position), and

(3)   leave statistics.

5.   A similar but more condensed book based on the essential headings listed above can be maintained by the section commander.

ADMINISTRATION

6.   Administration is a principle of war and a commander's responsibility. The second in command ensures the day-to-day execution of logistical resupply and redistribution in the field. The following sections will discuss administration briefly under two headings:

    a. **Personnel Services:**

        (1) casualties,

        (2) replacements,

        (3) prisoners of war,

        (4) health and hygiene, and

        (5) personnel administration and welfare, and

    b. **Service Support:**

        (1) replenishment, and

        (2) maintenance.

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SECTION 2

PERSONNEL SERVICES

CASUALTIES

1.   Casualties must be rapidly and efficiently cared for and evacuated. Treatment, care and evacuation of casualties must be included in all operation plans. All platoon members must be trained in Combat First Aid and trained in casualty treatment and evacuation. Two field dressings should be carried by every member of the platoon.

CASUALTY EVACUATION

2.   Although troops must not jeopardize an operation to minister casualties, efficient collection and evacuation procedures have an important psychological effect on soldiers' morale. Casualties must be treated and evacuated as soon as possible to ensure the best chance of survival and a quick recovery.

3.   The platoon second in command will coordinate the collection and evacuation of casualties from the battle field thus leaving the commander free to fight the battle. If the platoon must continue without the wounded, the platoon commander should leave at least one soldier with each group of casualties to guide in ambulances and to provide local protection. .

4.   During the consolidation phase of an attack, the reserve section will normally be tasked for this important duty. The casualty evacuation system within the battalion consists of:

   a.   initial first aid by casualty or partner;

   b.   recovery and evacuation of the casualty to the company headquarters by litter or by company ambulance;

   c.   evacuation from company headquarters to the UMS by unit ambulance;

d. sustaining care by unit medical officer (MO) and medical assistants at the UMS; and

e. evacuation from the UMS to a higher medical unit by brigade ambulance where medical treatment can be administered.

5. This process may be modified by having a company ambulance evacuate directly to the UMS. Commanders must also consider air medical evacuation when this means is available.

6. The sick and wounded will keep their personal weapons when they are evacuated. LMGs should be left with the section and the member issued with a rifle.

7. **Enemy and Civilian Casualties.** Enemy and civilian sick and injured are to be afforded the same medical treatment as friendly sick and injured, and are to be evacuated by the same means. Enemy personnel are to be searched and weapons and equipment confiscated in the normal manner, before evacuation from the company area. Friendly walking wounded can be used for escorts.

MORPHINE

8. In certain operations, morphine may be issued for administration to personnel in severe pain. Due to the dangers of its use, the unit medical officer will issue morphine only to officers and NCOs who have received instructions on its use. At platoon level, it should normally be issued to the platoon and section seconds in command.

DEPRIVATION OF SLEEP

9. Commanders at all levels must be aware of the effects that deprivation of sleep and sleep loss will have on their soldiers. These effects are more psychological than physical - mental alertness, mood, vigilance and the ability to do detailed tasks deteriorate.

10. Tired soldiers tend to become passive and docile rather than aggressive, and are often hard to motivate. They do tend to cope

10.   Tired soldiers tend to become passive and docile rather than aggressive, and are often hard to motivate. They do tend to cope adequately with simple physical tasks, so well-learned tasks may suffer little.

11.   Tired soldiers are expected to remain effective for physical tasks for up to three days without sleep. Approximately 50% will remain effective for six days with one-and-a-half hours of sleep per day, while 90% will remain effective for up to nine days with three hours of sleep per day.

12.   When sleep loss becomes a factor, commanders should order forced rest whenever possible. Sleep, no matter how little, is always beneficial, and will help to prevent stress reaction casualties.

STRESS REACTION CASUALTIES

13.   Stress reaction casualties are those soldiers who, for a variety of reasons are unable to cope with the demands of battle. Symptoms include apathy, depression, inactivity, anxiety, deterioration in efficiency, jumpiness and signs generally attributable to fatigue and lack of sleep.

14.   Experience has shown that even the strongest individuals are susceptible to combat stress. In a high intensity battle of two to three days duration, stress reaction casualties could reach between 10% and 25% of a unit strength. Platoon commanders, assisted by the MO and company medical assistants, must be constantly on the alert for cases of battle exhaustion.

15.   Every effort should be made to prevent it or provide relief to the genuine cases. Attempts by individuals to pose as exhaustion cases to avoid battle should be severely dealt with. Picking the genuine cases requires knowledge of personnel and close contact with junior commanders.

16.　　**Prevention.** Commanders can take several measures to minimize combat stress casualties, such as:

    a.　developing platoon and section cohesion with emphasis placed on group identification, integration and a sense of permanency;

    b.　instilling trust in leaders and group members, with strong horizontal and vertical communications;

    c.　encouraging strong social support that emphasizes family security and well-being;

    d.　ensuring that soldiers are physically fit as this will assist them in combating fatigue and will allow for an increase in their personal limits of endurance;

    e.　ensuring training is hard, realistic and of an intensity and duration expected in operations. By developing high levels of competence and by familiarizing soldiers with the real capacity and capability of the enemy in terms of his tactics, technology, weapons effects, strengths and weaknesses, the more insidious aspects of fear - that of the unknown - can be minimized; and

    f.　allotting equitably dangerous jobs such as patrolling and scouting.

17.　　**Treatment.** Not all stress reaction casualties have to be evacuated. An understanding of the condition, and strong leadership will minimize the necessity for evacuation. A soldier who has become somewhat passive and unable to initiate activity on his own should be:

    a.　counselled and morally supported by his section commander;

    b.　understood and morally supported by his peers;

    c.　given an opportunity to rest; and

d.   temporarily placed in a less stressful position, such as with the company quartermaster.

18.   **Evacuation.** If the soldier does not react positively to treatment at the unit level, he must be evacuated for medical treatment.

19.   He must receive treatment as close as possible to the FEBA and be returned to duty rapidly after having been allowed sleep, food, shower, clean clothes and a chance to talk. with a sensitive listener.

DEATHS

20.   The bodies of dead enemy and friendly soldiers should be moved to the axis of advance or to the company collection point under the supervision of the platoon second in command. Bodies should be placed in casualty bags, if available, or covered with a ground sheet or blanket, and their location marked with a weapon driven into the ground by the bayonet. One portion of the identification disc should remain on the body, and the other passed to the Company Quartermaster Sergeant (CQMS). The bodies of enemy soldiers are to be placed in a separately identified group.

21.   Platoon commanders should draft letters to the next of kin in accordance with unit SOPs.

22.   Burial procedures are explained in B-GL-303-001 /FT-002. It conforms to STANAG 2070. As emergency burials are a unit responsibility, this subject is not further discussed in this chapter.

REPLACEMENTS

23.   When available, replacements are sent forward daily via the delivery point (DP). The number of replacements being forwarded is based on the casualty and strength returns.

24.   New personnel are usually held in A echelon for a couple of days where any shortages in personal equipment are made up and where they are briefed on current operations in progress and on the unit itself.

25.   Individuals who are returning to the company having recovered from wounds or illness may be sent back to their platoon with the CQMS on the next resupply run.

26.   Commanders must not underestimate the importance of team morale. Efficient reception arrangements and training for replacements are vital. They must not be treated as "outsiders" but welcomed as valuable additions to the platoon and section teams.

27.   If possible, replacements should not go into battle until they have been fully indoctrinated into their new platoon/section. The preservation of friendships made during training is important, and friends should, if possible, be assigned to the same section.

28.   The need to team newcomers with veterans should be balanced against the need to maintain existing fire team cohesion.

PRISONERS OF WAR

29.   **General.** Personnel at all levels of command involved in any way with prisoners of war must ensure compliance with the full provisions of the Prisoners of War Convention, the Wounded Conventions and the Maritime Convention.

30.   From the moment of capture, prisoners are considered to be in the hands of the capturing power and not of individuals or units which have captured them. They may only be transferred to the forces of any other power under special or standing instructions, and then only if the other power is a party to the Convention.

31.   On capture, Prisoners of War (PWs) are disarmed. Officers, NCOs and other ranks are segregated, searched, guarded and, if

necessary, protected. No talking should be allowed and no comfort other than necessary medical attention should be given.

32.   Weapons and ammunition, compasses, binoculars, technical equipment and all papers found on the PW are clearly identified with the individual prisoner, confiscated and sent to company headquarters for onward transportation to the Intelligence Section at Battalion Headquarters by any available means. Any item of suspected value for intelligence must clearly be identified to the PW in whose possession it was found.

33.   PWs of any rank are a valuable source of intelligence. Any unit identification should be passed immediately to the company headquarters.

34.   Wounded PWs are evacuated under guard in the same manner as friendly sick and wounded, but they must be clearly identified as PWs.

35.   **Handling Drill.** PW handling must be included in all tactical planning. During an attack, PWs can quickly absorb an inordinate number of soldiers as guards. It is important, therefore, that section and platoons establish efficient drills for dealing with them. Drills should take the following sequence:

   a.   PWs captured by forward sections and platoons are immediately disarmed, made to lay down spread eagle and guarded.

   b.   If the attack is complete, the section second in command escorts the PWs to the platoon second in command; if the attack is ongoing, the platoon second in command, with escorts from the reserve section or platoon HQ, moves forward to take over responsibility for the PWs as soon as possible, so that the forward sections can carry on.

   c.   The platoon second in command escorts the PWs to the company PW collection point as soon as possible.

36.   **Search Drill.** Other than the initial disarming of PWs, segregation, searching and tagging is normally done first at the company level, under the CSM's supervision.

37.   Under certain circumstances this may have to be done at section or platoon level.

38.   The following points are important during the searching of PWs:

    a.   all documents and equipment are to be placed in a sand bag or other suitable container;

    b.   PWs and equipment are tagged using DND Form 136, a quantity of which should be carried by each section and platoon second in command;

    c.   PWs are segregated into military and civilian, male and female, and officer and non-commissioned groups; and

    d.   talking and smoking are forbidden.

39.   **Personal Equipment.** PWs may retain their personal effects, except for arms, technical equipment and military documents. They will be allowed to keep equipment issued for personal protection such as helmets and respirators, identity documents, clothing, articles for feeding, badges of rank, and decorations.

40.   Money and valuables will only be taken from a prisoner on the order of an officer. If this is done, a detailed receipt showing name, rank, unit, and items concerned must be given to the prisoner. This provision is included in the Convention to prevent looting of prisoners' property by their captors and as a deterrent to escape.

41.   **Evacuation.** PWs are normally collected from the company PW collection point by the battalion MP section. Platoons may sometimes be tasked to escort PWs, especially if there are large numbers.

42.   The drill is as follows:

a.   armed escorts are provided on a ratio of one per ten PWs, with never less than two escorts. Walking wounded can be used for this purpose;

b.   the escort should carry any captured equipment bags;

c.   PWs should be blindfolded and secured only if necessary to prevent them from escaping or acquiring intelligence, as these procedures will slow the evacuation considerably;

d.   PWs may be used to carry friendly or enemy wounded; and

e.   aimed fire may be used to stop a PW attempting to escape, provided a warning has been given. PWs should not be mistreated for attempting to escape, as this is a normal act of patriotism and personal courage.

HEALTH AND HYGIENE

43.   General casualties due to sickness and disease can far outnumber battle casualties in any campaign. Good hygiene is the greatest single contributor to a high standard of health, and is thus directly related to a platoon's battle readiness. Platoon and section commanders must insist on a high standard of hygiene, both through personal example and frequent inspection.

44.   **Dehydration.** Commanders must insist on regular fluid intake, both for themselves and their soldiers, to avoid the effects of dehydration. This is particularly important in extremely hot or cold climates. Caffeine based drinks, such as coffee, tea and cocoa, while good for morale and warmth, are diuretics and can lead to dehydration. They must not be allowed to substitute for water and juices.

45.   **Personal Hygiene.** Personal hygiene is the first line of defence against non-battle casualties due to disease and sickness. Platoon and section commanders must insist upon a high standard of personal cleanliness.

46.   Regular washing of all areas of the body is essential for good health. Shaving helps reduce skin sores and irritations, freshens up the individual and improves morale. The platoon commander should carry out regular body and foot inspections.

47.   **Latrines.** When chemical or portable toilets are not available, latrines must be dug, usually one per platoon. They should be at least two metres deep and lime should be used liberally. Latrines must be sited down wind: in hot climates, they must be located in a shaded area, if possible. They must be screened, well advertised, and marked "Foul Ground" and dated when filled in. All precautions must be taken against flies breeding in latrine areas.

48.   Details on latrine construction and siting requirements are contained in A-MD-213-001 /FP-001 Canadian Forces Health Manual.

49.   **Urinals.** Urinals must be sited close enough to each section position and to the platoon headquarters so as to provide security and encourage use without compromising security or health.

50.   **Refuse.** Refuse should be sent back in garbage bags with the CAMS at the DP. If this is not possible, it must be buried or burned (if the tactical situation permits), or both.

51.   Refuse is a hazard to both security and hygiene. Platoon commanders should give instructions concerning the refuse pit in their orders.

52.   **Fitness.** Good physical fitness enhances a soldier's fighting potential and increases his chances of remaining healthy. A Battle Physical Fitness Program is an essential part of training.

PERSONNEL ADMINISTRATION AND WELFARE

53.   **Honours and Awards**. The recognition of bravery and achievement is an important part of the maintenance of morale. Such recognition can range from a personal word of praise from the section or platoon commander to the formal awarding of a medal or decoration. Platoon commanders need to be alert to deeds that merit such recognition. When in doubt, they should not hesitate to discuss the matter with their second in command or the company commander.

54.   **Spiritual Welfare.** Well disciplined soldiers can overcome their fear of death and injury for short periods during combat. They often need to discuss their fears in an open and non-threatening atmosphere, especially after a battle. Platoon and section commanders must be supportive and must not belittle or trivialize their soldiers' genuine fears and concerns.

55.   Every opportunity should be taken to have the battalion chaplain visit the platoon. While some will not consider themselves very religious, the threat of death will find most soldiers not wanting to miss an opportunity to talk to the chaplain or to participate in worship. A proper concern for spiritual welfare will go a long way to reducing stress reaction casualties.

56.   **Mail**. A most important contributor to morale is the regular arrival and departure of mail. Soldiers on active service are always anxious for news from home and family. Section and platoon commanders should encourage their soldiers to write letters. The exchange of letters permits a soldier to maintain contact with a stable environment, and helps to relieve the pressure of combat.

57.   **Censorship**. On occasion, censorship will be imposed on outgoing mail as a security measure. Direction on censorship of mail will be promulgated by higher authority.

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SECTION 3

COMBAT SERVICE SUPPORT

ECHELON SYSTEM

1.   **Echelons**. Battle Groups are organized into echelons to provide a degree of protection and survivability through dispersion while maintaining adequate control. These echelons are:

    a.   **F Echelon**. This consists of the men, weapons and vehicles required for the fighting of the immediate battle.

    b.   **A Echelon**. This consists of the men, weapons and vehicles required to supplement F Echelon. It is normally located in the Brigade Administrative Area (BAA). If the battalion is operating alone it may be located behind the battalion F echelon. When this is so, it moves with the battalion under unit control, usually commanded by the Transport Officer (TO). A Echelon may be further subdivided into:

        (1)   **A1 Echelon**. This includes the men, vehicles and equipment required for the immediate resupply, repair and maintenance of F Echelon. It normally operates under the command of the company second in command and is located one or two tactical bounds behind the F Echelon.

        (2)   **A2 Echelon**. This includes the balance of men, vehicles and equipment required forward for the day to day resupply, repair and maintenance of the F Echelon. It will normally operate under battalion control.

    c.   **B Echelon**. This includes the men, vehicles and equipment not included in the F or A Echelons but required for the routine administration of the unit. It is normally located in the BAA under formation control.

REPLENISHMENT

2.   **General**. Infantry battalions usually deploy with a basic load of combat supplies - three days consumption of ammunition, rations, POL, and water. These may all be distributed to the rifle platoons, or portions held by the company or battalion quartermasters.

3.   Replenishment may be either:

   a.   battle replenishment (the urgent supply of POL and ammunition as battle progresses); or

   b.   routine replenishment (the regularly scheduled replenishment of combat supplies plus any demanded commodities).

4.   **Demands.** The platoon second in command will compile a list of requirements for the following night, and pass them to the company quarter master sergeant (CQMS) during the daily resupply. These routine demands can be amended by supplementary demands submitted via the company second in command. Emergency demands for supplies needed to continue operations will be requested via company HQ. If approved, they will be delivered as soon as possible.

5.   **Delivery Points (DP).** Routine resupply is effected through a daily delivery point, usually at night. The platoon second in command, accompanied by a work party, meets the CQMS at the company DP. He hands in his routine demands for the next night, and receives those items that were demanded the day before, along with the platoon's daily maintenance of combat supplies.

6.   The platoon second in command, in turn, redistributes supplies to the sections second in command, and the weapons detachment commander for platoon HQ. Procedures for hide/harbour and running replenishment are detailed in B-GL-301-002/FP-Z01.

7.   **Ammunition.** Each member of the platoon will be required to carry a basic load of ammunition for his personal weapon. In addition,

he may be required to carry a portion of the basic load for the platoon support weapons.

8.   A small reserve of small arms ammunition may be held at platoon HQ for emergency resupply of the rifle sections in battle.

9.   During mechanized operations, the company sergeant major (CSM) and platoon second in command normally carry a small reserve of all natures.

10.   **Petrol, Oil and Lubricants (POL).** Naphtha is replenished on a can-for-can basis. Stoves and lanterns should be filled and remaining fuel consolidated before going to the DP.

11.   Vehicle fuel is replenished either on a can-for-can basis, or direct from a fuel bowser. When jerry cans are exchanged, vehicle tanks should be topped up beforehand to ensure that the maximum number of empty cans are available.

12.   **Rations.** The basic load of pack rations, three days' supply, is held throughout the battalion - some on the soldier, some in company vehicles and some in the A echelon ration platoon.

13.   Whenever possible the soldiers will be fed fresh rations; if this is not possible, individual pack rations will be issued. Rations come forward automatically, through DPs, based on strength returns submitted on administrative nets.

14.   **Water.** Water resupply is based on 20 litres per soldier per day under temperate conditions, for drinking, cooking and ablutions. The platoon second in command should replenish all empty water jerry cans from the company water trailer at the DP. Local water supplies should only be used when approved by the unit medical officer.

15.　　　It may be necessary to issue sterilization tablets to soldiers when local water sources are to be used and have not been tested for purity. Water usage must be controlled. Commanders must ensure that water is not wasted, and that soldiers get an adequate intake of liquids.

SECTION 4

MAINTENANCE

1.   Proper maintenance is vital if weapons, vehicles and equipment are to function when required. Platoon and section commanders must ensure that:

   a.   During operations, vehicles and weapons are checked and maintained daily.

   b.   Drivers must conduct halt parades whenever possible, and supervise crew maintenance daily.

   c.   Log books for vehicles and applicable weapons must be accurately maintained.

   d.   When not engaged in active operations, a specific time should be set aside each day for maintenance.

   e.   Cannibalization of parts from equipment casualties will only be done on order.

   f.   All commanders must know how to inspect vehicles and weapons for combat readiness, maintenance and running condition. Section commanders (and the weapons detachment commander for platoon HQ) should carry out daily inspections, and the platoon commander should supervise and conduct spot checks. Commanders must set the example by cleaning and maintaining their weapons, and should insist that soldiers not rest until all essential maintenance is completed.

2.   Periodic kit checks are required to ensure that soldiers have all their personal equipment and that it is functional. The platoon commander coordinates kit inspections, spot checking while the section/detachment commander does the detailed inspection.

3.   In rear areas, maintenance should be conducted as a platoon activity, under the supervision of the platoon second in command. He will ensure that items requiring repair are properly tagged, and that missing parts and stores are replaced. The platoon commander should leave his NCOs alone to get on with maintenance, after setting a time and place for his inspection.

4.   Vehicle and equipment casualties are usually repaired in situ if possible, by company or battalion mobile repair teams (MRTs). Drivers stay with their vehicles, to assist the technicians, and to drive the vehicle back to the platoon when it is repaired. If the vehicle must be evacuated beyond the service battalion level, the driver will be returned to the unit, and a replacement vehicle issued.

LOAD CARRYING

AIM

1.   The aim of this annex is to outline the composition of various combat orders of dress and equipment and to discuss load carrying during operations.

COMBAT ORDERS OF DRESS

2.   There are three combat orders of dress for the infantryman:

a.   **Fighting Order**. The fighting order consists of the ammunition, personal weapons, and items of personal equipment which must be immediately available in close quarter combat. Specifically, this will include weapon, ammo, helmet and webbing with at least one meal and no more than three meals. It may include special items for specific operations.

b.   **Battle Order.** This consists of fighting order plus crew-served weapons and those items of personal and section ammo, equipment, and rations necessary to support a dismounted soldier in combat for a period of not exceeding 72 hours. Specifically this will be fighting order plus small pack or NBC pack.

c.   **Marching Order**. This consists of battle order plus those items of equipment necessary to support a dismounted soldier in the combat zone for an indefinite period. Specifically this will have the soldier wearing fighting order and carrying battle order and personal kit in his rucksack, and may include section/platoon equipment, weapons and ammo as is necessary.

3.   Appendix 1 is a detailed list of the items which makeup marching order and their weights. If a soldier carries only those personal items of kit needed to sustain him in operations he will carry in excess of 25 kg. If he carries, in addition to this, his share of

section equipment he will carry in excess of 30 kg. If he adds to this his share of section and platoon weapons and ammo he will carry in excess of 40 kg in or on top of his rucksack.

4.   Research indicates that a soldier can carry an amount equal to 35 % of his body weight and still retain a high percentage of his agility, stamina and mobility. When the load exceeds 45 % of his body weight his functional ability drops rapidly. Training can improve load carrying capability by 10-20% only. For the average trained soldier this means marching order weights of 30-35 kg.

5.   Optimum fighting order weight is not more than 10-15 kg. Optimum battle order weight is not more than 15-20 kg. Optimum marching order weights should not exceed 35 kg. To achieve these weights commanders must attempt to lighten loads by tailoring equipment lists to task. Strict adherence to kit lists, for the sake of uniformity, will unnecessarily overburden soldiers.

6.   This said, recent military history demonstrates that dismounted infantry are still carrying loads in excess of 45 kg in operations (added weight is mainly ammo and weaponry). Although not desirable, the ability to carry such heavier loads may be necessary. Commanders at all levels are responsible to ensure that their soldiers are capable of arduous load carrying. This ability remains the essence of all infantry work.

MARCHING ORDER

Definition: Marching Order consists of Battle Order plus those items of equipment necessary to support a soldier in the combat zone for an indefinite period of time.

WEIGHT OF ITEMS WHICH MAY BE CARRIED IN MARCHING ORDER

INDIVIDUAL KIT	Weight (kgs)	SECT EQUIP - ANY 4 OF THE FOL	Weight (kgs)	SECT/PL WPNS AND AMMO	Weight (kgs)
(a)	(b)	(c)	(d)	(e)	(f)
bootliner	.17	shovel	2.27	M72	1.97
overboots	1.56	pick	2.73	para flare or	.32
scarf		wire cutters	.75	trip flare	.42
combat jacket	1.38	binos	1.32	C7 rifle	3.34
jacket liner combat	.88	(+ case)			
shirt	.41	machete	.62	AND ANY	
combat trousers	.65	axe	1.00	THREE OF THE	
socks (3)	.27	sigs wire	.50	FOL:	
drawers (2)	.17	rope	2.20		
undershirt (2)	.19	glow sticks	.30	60 mm Mor	7.72
rain jacket	.56	1st aid kit	1.00	60 mm Mor	1.45
rain trousers	.40	morphine	1.00	Ammo	
sleeping bag inner	2.06	AN/PVS 505	1.75	84 mm PAW	13.9
sleeping bag liner	.59	AN/TVS 501	2.00	84 mm Ammo	7.0
sleeping bag valise	.30	stove	.79	C6 7.62 mm	11.0
poncho	1.36	radio	11.80	C6 Ammo	5.40
air mattress	1.40			C6 barrel	3.00
poncho liner	1.35			C9 Ammo	3.20
Bivy Bag	.77			ERYX LAW	
82 pattern	3.08			ERYX Ammo	
rucksack				Claymore	1.00
NBC Ensemble	4.40			mine	
(+ bag)				C7 Ammo	1.80
Flak vest	3.80			(150)	
entrenching tool	.99			grenades	.50
wash kit	.24			(approx)	
foot powder	.60				
towels	.47				
(1 hand, 1 fd)					
rations (48 hrs)	1 .00				
fuel tabs (48 hrs)	.09				
flashlight	.34				
spare canteen	1.05				
average total	25.0	**average total**	5.0	**average total**	10-12