

TRAINING FOR WAR

(BILINGUAL)

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FOREWORD

1. B-GL-304-001/PT-001, Training for War, is issued on authority of the Chief of the Defence Staff.
2. This edition supersedes B-OL-304-001/PT-001 (CFP/PFC 304(1)) dated 13 October 1977.
3. Suggestions for changes to this publication shall be forwarded through normal channels to Land Force Command Headquarters, Attention G3 Trg Dev.

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CHAPTER 1
INTRODUCTION

SECTION 1
GENERAL

"This conduct of war itself is without doubt very difficult. But the difficulty is not that erudition and general genius are necessary to understand the basic principles of warfare. The great difficulty is: TO REMAIN FAITHFUL THROUGHOUT TO THOSE PRINCIPLES WE HAVE LAID DOWN FOR OURSELVES."

Karl Von Clausewitz - 1812.

AIM

1. The aim of this manual is to provide guidance for officers and non-commissioned members (NCMs) in the planning and conduct of training for war, with emphasis at unit and formation level.

SCOPE

2. This publication is the primary document for operational training at unit and formation level for the total force. Training matters relating to the full spectrum of warfare, in other words, a general purpose combat capability, are discussed and guidance provided.

3. Leadership at all rank levels is emphasized as being the most important factor in achieving success in battle and during peacetime training. Reference is also made to the training requirement for air/land warfare and tactical air operations in support of the land battle.

SECTION 2

ABBREVIATIONS AND TERMINOLOGY

ABBREVIATIONS

1. Abbreviations used in this manual are in accordance with B-GL-303-002/FP-Z09, Operational Staff Procedures, Volume 2, Staff Duties in the Field, Supplement 9) Army Abbreviations.

TERMINOLOGY

2. The terminology used in this manual is in accordance with B-GL-303-002/JX-Z03, Operational Staff Procedures, Volume 2, Staff Duties in the Field, Supplement 3, Army Glossary.

SECTION 3

TRAINING PHILOSOPHY

GENERAL

1. The time devoted to training soldiers for war must be the paramount priority in peacetime. Any training which does not contribute directly to the soldier and unit's potential success in battle should be eliminated. Commanders must ensure that their staffs and troops are forced to devote a minimum amount of time to routine, day to day administration.
2. An immense amount of time and resources are always required in peace and in war to ensure that soldiers and units achieve and maintain the highest standard of professionalism. With the introduction of sophisticated weapons, the principle of cooperation among the combat arms, combat support arms, and combat service support units is vital and must be emphasized in all training. This requires foresight in the grouping of men, weapons, equipment and supplies to ensure the proper balance for combat. It follows that all elements of the combined arms team, including air, must be exercised together under realistic field conditions. Peacetime concentrations, although expensive to conduct, are essential for the total force to ensure that units and formations at all levels are being practised, and that the highest training standards are achieved.
3. Commanders and staff officers must focus their tactical training on the battlefield. It must be recognized that soldiers who are not physically, emotionally and professionally fit for their assigned tasks will become military liabilities under battlefield conditions.
4. Combat leaders must remember that in war it is the man who counts, and with well trained men almost anything is possible. Officers and NCOs must learn to be flexible in order to adapt quickly to operational changes. It has been said that machines are fast, accurate and stupid and that men are slow, inaccurate and brilliant. Leaders must believe that the man is still the soul of battle and without courage, discipline, toughness and the will to win, he is doomed on the modern battlefield, no matter how powerful his machines. The soldier's will to win in battle will depend on three vital and interdependent essentials: quality of leadership; quality of training; and quality of equipment. The greatest of these is leadership.
5. Although the profession of arms has grown vastly more complex in our time, man remains what he is. His needs demand recognition and he must be able to identify himself with his group. In essence, it is the regimental system which, as a source of strength, has held men together in the past, and it is the continuance of this system which will create the environment that produces individual military professionalism and well-trained units.

SECTION 4

CONFLICT

"A good general can be defeated, but he should never be surprised"

Napoleon

SCALES OF CONFLICT

1. The conflicts of interest which lead to war may vary from mere disagreements to irreconcilable differences in national objectives. The scale of military operations will vary in proportion to the conflict of interest. The scope, intensity and duration of wars also depend upon the extent to which a country will make sacrifices to achieve its national objectives. The scales of any conflict may be broken into four general categories:

- a. **High Intensity.** High intensity conflict is warfare between major powers and alliances in which both sides are prepared to employ the full range of weapons and resources available to them. It could involve the use of nuclear weapons from the outset or it could be initiated by conventional weapons.
- b. **Mid-intensity.** Mid-intensity conflict is an armed conflict fought with limited objectives under definitive policy limitations as to the extent of destructive powers that can be employed, or the extent of the geographical area that might be involved.
- c. **Low Intensity.** There are two types of low intensity conflict:
 - (1) **Type A.** These are operations to establish, regain or maintain control of land areas or populations threatened by guerilla action, insurgency, rebellion, dissidence, communal violence, civic disturbance or other tactics aimed at internal seizure of power or changes to the established order by illegal, forceful means.
 - (2) **Type B.** These are operations in an area of political or armed conflict for the purpose of maintaining or restoring the peace other than by the application of offensive armed force except under extreme circumstances. Then, only minimum force is applied.

STANDARDIZED DOCTRINE AND TACTICS

2. Operational training must flow from a common tactical doctrine supported by a training system which is standardized throughout the army from basic through to collective training. ATP 35, Land Force Tactical Doctrine, a NATO document to which Canada has agreed, forms the conceptual base for CF doctrine. Flowing from ATP 35 are B-GL-300-000/FP-000, Operations, Land and Tactical Air, The Army, and B-GL-301-001/FP-001, Operations, Land and Tactical Air, Volume 1, Land Formations in Battle which provide the basis for other manuals directed at unit level and below.

3. Doctrine is continuously being reviewed in the light of emerging concepts, new equipments, experience gleaned from recent conflicts and the results of operational research. To ensure commonality in doctrine at all levels and in all branches, there must be continual liaison between NDHQ, commands, staff colleges, schools and field units. The Army Doctrine and Tactics Board is the central agency which has the authority and the staff to provide for an authoritative, current and coordinated body of tactical doctrine.

4. The training system can include the best instructors and the most motivated students, but the quality of the product of the system will hinge to a large degree on common standards that enable individuals from different arms and services to work together as an effective fighting team.

REQUIREMENT FOR A GENERAL PURPOSE COMBAT CAPABILITY

5. As discussed earlier, the modern battlefield may range from a guerilla-type war to nuclear. We must be prepared for nuclear, high intensity conflict even if we think the most likely occurrence might be a mid or low intensity conflict. A study of potential areas of conflict in the world confirms that armies must be ready on short notice for any kind of war, at any place, and at any time. This is the worst case. If we train to the highest levels of conflict, we will be able to deal with lesser scales. The reverse is not true.

6. During WW II general purpose forces made amphibious landings in Sicily, Italy and Normandy and some units fought across the mountains of Italy. Canadians were at the forefront in conducting large mechanized night operations in Normandy. In the early 1950s, general purpose forces fought in Korea with the United Nations and we have had subsequent experience in peacekeeping, internal security, winter operations in the Arctic and mechanized training in NATO in peacetime.

7. Doctrine and organizational and training policies must be complementary. The bulk of the army should retain a general purpose combat capability but there remains a requirement for selected units to specialize as airborne to provide a quick reaction capability. It follows that if there are general purpose forces in being, they can be given special training to meet different conditions such as are found in the Arctic, the jungle or in counter-guerilla situations. It is important to concentrate first on the training required to produce a professional soldier, and then broaden this training so that he can perform such specialized skills.

CHAPTER 2
ORGANIZATION AND PRINCIPLES OF TRAINING

SECTION 1
TRAINING POLICY

"There is nothing new except what is forgotten."

Mademoiselle Bertin
1744-1813

TRAINING POLICY

1. NDHQ is responsible for promulgating the national training policy for regular and reserve forces. Land Force Command Headquarters is responsible for ensuring that training is conducted pursuant to that policy and has issued the Land Force Training Policy (LFTP) to give army-oriented direction.

PRIORITIES

2. When organizing training it must be remembered that regular formations and units should be capable of taking part in any form of war, at short notice, and with minimum retraining. Therefore it is important that training gives soldiers a general purpose combat capability.

3. The size of the regular force does not allow specific units or formations to be trained for only one role. Training must meet the challenge of the most demanding type of conflict. If it does, troops will be able to adapt to lesser tasks with little difficulty.

DOCTRINE

4. Tactical doctrine is continuously being examined and revised in the light of new equipments and potential threat capabilities. A-GL-399-000/AX-000, Army Doctrine Catalogue, issued by the Army Doctrine and Tactics Board (ADTB), provides the most current list of authorized publications and videos. It is critical that trainers use the most current doctrinal publications and that what is being taught at schools and colleges is in complete agreement with the tactical doctrine being taught at formation and unit level. If this is not done, the result will be confused soldiers who will not reach their operational potential.

SECTION 2

ORGANIZATION OF FORMATION AND UNIT TRAINING

COMMAND RESPONSIBILITIES

1. Commanders at all levels are responsible for ensuring that the training is done pursuant to the policy and directives established by superior headquarters. By personal visits, and by insisting that the HQ staffs keep in close personal contact with the units, commanders ensure that the best possible facilities and appropriate resources are made available for conducting realistic training.
2. In addition to exercises and discussions, commanders can best supervise and assist training by:
 - a. issuing clear training directives that establish goals and standards;
 - b. allocating suitable terrain for training when required;
 - c. controlling allocated training budgets to ensure that they are wisely spent;
 - d. allocating training ammunition, training stores and logistic support to units at requested scales; and
 - e. coordinating air support requests for operational commitments and peacetime exercises.

FORMATION TRAINING

3. Formation commanders must keep a close eye on training. By constant visits they must ensure that training is ongoing and maintained on realistic lines. They must not overlook the fact that their own HQ must also be trained for war to the same standard as the field units. Staff officers from their HQ must keep in close touch with the units through periodic liaison visits. The aim should always be to detect problems and solve them before training is affected.
4. Formation commanders can supervise and co-ordinate training by:
 - a. issuing training instructions;
 - b. conducting model discussions, tactical exercises without troops (TEWTs) and one or two-sided exercises with troops;
 - c. holding training conferences at appropriate times during the annual training cycle, generally before any major training period is about to commence or after it has been completed;
 - d. training the formation HQ by conducting HQ exercises;

- e. when applicable, directing that courses of instruction be held under formation arrangements to upgrade officers and NCOs; and
- f. conducting annual inspections and periodic visits to units to supervise their training and ensure that training instructions are being followed.

5. **Training instructions.** Based on the Command Training Directive, a formation commander will issue training instructions from which subordinate commanders will plan their own programmes. The training instructions must clearly state the training aims and priorities, and contain the following:

- a. the training period to be covered;
- b. successive stages to be reached with critical dates;
- c. subjects to be emphasized during training;
- d. division of time between individual, collective and special training;
- e. dates of formation exercises and other types of training being ordered by the commander or higher formations;
- f. allotment of training areas, ranges and ammunition as required; and
- g. details of courses and allocation of vacancies.

6. Training instructions must be clear, concise, helpful to the recipient, and set out in a logical sequence. As far as possible all written orders pertaining to training should be incorporated into the training instruction. Lengthy details and a summary of dates etc, should be issued as annexes.

7. Theoretical training, such as TEWTs and command post exercises (CPXs), however well-organized, can never replace field training exercises (FTXs). As a result, commanders must take every opportunity to get the troops out on the ground. It is often feasible at formation level to conduct small competitive exercises for a combat team. Such an exercise can be carried out in turn by all combat units within the formation and can become a competition which will capture and maintain the interest of all concerned. On completion, the commander will have comparative data on the standard of all-arms training reached by each sub-unit in the formation. Once he is satisfied with the all-arms training reached at the company or equivalent level, it is a simple matter to organize exercises on a larger scale, knowing that the fundamental battle procedures and drills are correct.

INFLUENCE OF COMMANDERS

8. Formations should reflect the personality of their commanders, and this can only be done if they make their influence felt throughout the annual training cycle. How commanders do this will depend largely upon their personality and on the geographical dispersion of their command.

9. When units are widely dispersed, it is obviously uneconomical to take officers away from their units at frequent intervals for TEWTS, skeleton exercises, study periods etc conducted by formation HQ. In these circumstances it is often better to collect the officers for a formation study concentration when individual training at the unit level is largely being conducted by NCOs and they can be made available. This approach has the advantage of having officers from the formation live together during the study period and get to know one another. Regardless, the formation commander must insist that officers' tactical training is conducted either at the unit level or on a centralized basis.

UNIT TRAINING

10. On receipt of training instructions from formation HQ, unit commanders prepare their programme for the period under consideration, allotting, in accordance with the brigade commander's instructions, a proportion of time to individual, sub-unit and unit training. For many reasons, such as availability of ranges and training areas, weather, demonstrations arranged at short notice, inspections and provision of working parties etc, it is often impossible to fix times and dates with any degree of certainty. For these reasons the requirement for units to submit a detailed training programme to formation HQ on a regular basis should be carefully assessed, as much work is involved at unit HQ in the collation of sub-unit programmes and, once prepared, they frequently have to be amended. However, the formation commander must know the general outline of training within units during any period. Particulars of the type of training taking place over such periods, with dates of unit and field firing exercises, TEWTs, demonstrations, cloth model exercises, and other items of particular interest, must therefore be notified to formation HQ in an outline training programme.

11. Training programmes as suggested above should contain, as a minimum, the following information:

- a. date,
- b. unit or sub-unit taking part,
- c. aim of exercise,
- d. area,
- e. RV and time, and
- f. duration of exercise.

SECTION 3

TRAINING PRINCIPLES

DELEGATION OF RESPONSIBILITY FOR TRAINING

1. One of the most important principles of training is that in general, each leader should train his own command and in particular, each commanding officer should be given as free a hand as possible in training his own unit. The senior commander, although responsible for the overall operational readiness of his formation, will best achieve results by first issuing an annual training directive, and then providing the appropriate supervision, advice, coordination and assistance, to ensure that the objectives are met.
2. Peacetime training directives have a habit of becoming too centralized, leaving very little to challenge the imagination of the unit commander and his officers. In addition, unforeseen peacetime administrative demands on units tend to interrupt their training schedules. Therefore, as a general rule, it is preferable at formation level to reduce commitments to subordinate formations and allow them time to conduct the essential training based on their first-hand knowledge of particular weaknesses.

CENTRALIZED INDIVIDUAL TRAINING

3. As discussed above, it is generally a good idea to decentralize training. However, centralization of instruction for certain periods and subjects has advantages, even if it temporarily changes the usual chain of responsibility and command. Centralized instruction is particularly effective for specialist and technical training, especially where sophisticated and expensive equipment is involved. By pooling resources in personnel and equipment, a higher and more uniform training standard can be reached at unit and formation level. Control and supervision are also often simplified. The danger, however, is that if overdone, the personal touch required for unit and sub-unit esprit de corps, on which morale is built, will be lost. Morale may also be affected if too many unit personnel are away on courses at one time leaving the remaining personnel overburdened with unit tasks.
4. The decision on whether or not some form of centralized training is required should be based on whether it assists subordinate formations, or whether the provision of instructional and administrative staff by them becomes such a burden that it will interfere with their own collective training. The optimal use of training resources such as vehicles, ammunition, training aids and importantly, instructors will also be an overriding consideration.

PRINCIPLES OF TRAINING

5. Effective training will follow these principles:
 - a. **Good Organization.** Training programmes must be well organized and confirmed well before instruction begins. Foresight in planning and preparation is essential.

- b. **Realism and Interest.** Dull training lacking realism will achieve very little. Imaginative training always stimulates student interest resulting in better retention of knowledge and skills. Safety however, must be assured.
- c. **Simplicity.** Care must be taken to ensure that the subject matter is presented in a way which can be easily understood by all participants.
- d. **Availability of Equipment and Training Aids.** To produce qualified tradesmen and maintain student interest, good training equipment and aids must be made available.
- e. **Flexibility and Challenge.** Training must be varied and innovative, and the troops must be challenged if high results are to be achieved. In certain cases, this can be achieved by individual or group competitions.
- f. **Realistic Umpiring.** Troops engaged in FTXs require a realistic enemy and an atmosphere of war. This can be created by describing the sights and sounds of battle with an imaginative control organization, a realistic scenario and achievable objectives at all levels.
- g. **Practical Field Training.** There are no substitutes for the all-arms FTX. It is required to maintain high tactical standards.
- h. **Economy.** Because of the high cost of training and the difficulty in making troops available for FTX in peacetime, greater stress should be placed on the use of CPXs to train commanders, staff officers and, to a lesser extent, troops.
- j. **Tactical Exercises Without Troops.** At unit level, simple TEWTs should be encouraged and unit officers should be able to take their junior leaders into the field and conduct TEWTs with minimal exercise papers.
- k. **Use of Training Aids.** Sand tables and cloth models are excellent aids for teaching tactics and are easy to provide. Films, videos, ciné target devices, cut-away models and computer-assisted training simulators, while often more complicated, are important aids to conducting interesting, efficient and dynamic training.

6. Highly qualified instructors are essential to the success of any training programme. Unit and school instructors should attend techniques of instruction courses to improve their instructional ability. While they are conducting instruction, they should be checked periodically by chief instructors and standards staffs to ensure that the calibre of instruction remains high, that the subject matter being covered is in line with current doctrine and that training standards are being achieved.

SECTION 4

THE TRAINING CYCLE

GENERAL

1. Training must be progressively planned and can be divided into basic, individual and collective categories.

BASIC TRAINING

2. The basic training portion is covered by recruit courses and gives soldiers a grounding in basic military skills to prepare them for more advanced training. This is a vital stage in the recruit's military life since it is here that first impressions are formed. The instruction must be realistic, challenging and tough, both mentally and physically. It is at this early point where the individual should be assessed as being militarily acceptable or not. If the basic training standards are compromised, a weak individual may pass, only to be failed at a later stage. This results in a senseless waste of training effort.

3. The fundamental training objectives which apply to soldiers apply equally to the pre-commission training of officers.

4. **Focus Training on the Battlefield.** During basic training soldiers should never lose sight of the fact that their basic function is to be ready at short notice to engage an enemy. Since all soldiers must be prepared to defend themselves, it follows that regardless of their classification or occupation, all must reach a reasonable standard of individual combat effectiveness. Guerilla, sabotage and insurgency operations make it clear that units behind the lines are subject to the same type of threat as those in the front. The battlefield is in fact everywhere, and everything is vulnerable in war.

5. When training is focussed on the battlefield, training objectives are more easily defined and the tactical doctrine and training standards to be achieved are clearly established. All classification/occupation specifications must include this battle training, and schools and units must ensure that these standards are maintained.

6. **Conduct of Basic Training.** Instructors should always ask whether the training they are carrying out is realistic. If it does not appear to stand up to battle standards, it is probably presenting incorrect lessons. Realism is based on battlefield situations and this must be explained and demonstrated to recruits so they understand why training is done in a particular way. A good example of this is digging. Soldiers can be occupied in digging slit trenches for hours, but if they are not told why a trench requires at least eighteen inches of overhead cover and must be a well camouflaged position to fire from, they will never understand the importance of the lesson.

7. **Professionalism.** A soldier must be able to live under battlefield conditions and also perform his trade. In peacetime, the urgency connected with war is usually not evident and the requirement for battlefield survival sometimes does not receive sufficient emphasis. If basic training is not focussed on the requirements of the battlefield, then the training standards will be artificial, and soldiers will lack the degree of professionalism required for success and survival in battle.

INDIVIDUAL TRAINING

8. Soldiers must master basic military skills, built upon those learned during recruit training, before they can become successful members of a team. Individual training comprises three parts:

- a. general military training (GMT),
- b. leadership training, and
- c. technical/trades training.

9. The individual training phase is designed to mould individuals for the first specific position they will assume in a unit. In addition to GMT and trades training, there must be a programme to gradually develop the soldier's professional and personal qualities. These include courage, a sense of responsibility, endurance, alertness, inquisitiveness, discipline, loyalty and leadership.

10. It is at this stage where a sense of belonging to a particular battalion/regiment/unit must be introduced. Here the soldiers identify with the unit and are taught the roles and organizations of the military team. The virtues of the regimental system, which will later become a source of strength to them when stress is high, must be introduced. An example of the importance of this regimental eccentricity is taken from the book "The Profession of Arms", by General Sir John Hackett, when he states, "There is no better example of a highly coherent military group than airborne troops. The high morale of parachute soldiers has long interested me. Much of it comes, I think, from the fact that each man knows that in his parachute training he has won an important victory over himself. Further, he knows that this is true of his comrades too. More important still, he also knows that they know this of him."

11. On completion of the individual phase of training soldiers will still not be fully trained. They will, however, have learned a number of important military skills and are ready to join their unit as a member of a crew, section or team.

12. The organization and principles of individual training are contained in Annex A.

COLLECTIVE TRAINING

13. Collective training ultimately includes the grouping of all the combat, combat support, combat service support, air and other services on a formation level exercise. It is the culmination of the training cycle. Collective training in principle covers all units in the formation and must be progressive, starting with the sub-sub-unit and continuing upwards to unit and formation exercises. Under these conditions, operational training can be closely supervised and it will follow a logical progression. Several stages of training can, however, be done concurrently.

14. Training exercises must replicate, as near as possible, real battle conditions. Commanders must ensure that administrative support takes its proper place in the training and allow it to influence proceedings as so often happens in war. Ingenuity and innovativeness are required to properly exercise the service support units and logistics systems. For example all units could start the exercise with half-filled fuel tanks or other correspondingly reduced holdings.

15. Chapters 6 and 7 cover the preparation and methods of conducting various types of operational exercises.

SECTION 5

ADMINISTRATIVE TRAINING

THE REQUIREMENT

1. Administration concerns the staff management of personnel and logistics. No matter how effective a formation or unit may be in other respects, it will not be efficient if its field administration is weak. The best method of teaching field administration, and practising the formation's service support units, is to hold large scale exercises over extended periods of time. Under peacetime conditions such exercises are rarely possible, however, commanders should conduct local concentrations to practise their administrative staffs and service support systems. It follows that there are two aspects to this training:

- a. a portion common to all units' administrative training, and
- b. the training of service support units.

ADMINISTRATIVE FUNCTIONS AFFECTING ALL RANKS

2. Following are the main administrative functions which affect all ranks in war and must be taught at some point in training:

- a. how clothing and equipment is issued and accounted for in the field;
- b. how stores are obtained;
- c. the arrangements for feeding during operations;
- d. the handling of unit correspondence, including security in the field;
- e. the maintenance of personal and unit documents;
- f. hygiene and sanitation in the field;
- g. the system of evacuation of casualties in the field;
- h. the provision of reinforcements;
- j. the system of burial in the field;
- k. the handling of prisoners of war (PW); and
- m. the handling of salvage.

MATERIEL FUNCTIONS AFFECTING ALL UNITS AND FORMATIONS

3. The following are the main materiel functions which affect all units in war and must be taught:
 - a. the echelon system and the issuing of rations, petroleum, oil and lubricants (POL), ammunition, water and other supplies;
 - b. the maintenance, inspection and accounting for vehicles and weapons;
 - c. procedures for repair, recovery and replacement of vehicles;
 - d. materiel carried in first and second line transport;
 - e. logistics support capabilities of helicopters and other aerial delivery means;
 - f. the methods of establishing delivery points;
 - g. bath and decontamination procedures; and
 - h. postal service procedures.

CONDUCT OF ADMINISTRATIVE TRAINING

4. Administrative training can be carried out at formation study sessions or within units. Administrative staff officers and commanders of service support units can conduct instruction on their particular branches of service responsibility. Short courses, study periods, demonstrations and lectures are all effective means of training.
5. Administrative exercises fall into two categories:
 - a. Exercises for both operational and administrative personnel, where operational and administrative problems are considered together. These are the most realistic and by far the most important types of exercise.
 - b. Administrative exercises for logistics personnel and the echelons of the combat arms and support services.
6. It is not sufficient to wait for war or for infrequent large scale training exercises before testing administrative systems. Commanders must encourage and supervise administrative input into all collective training. This can best be arranged by commanders visiting the service support units during training, encouraging good liaison between the units in the formation and by arranging exchanges of instructors between combat and service support units.

SECTION 6

PEACETIME RESTRAINTS AFFECTING TRAINING

BUDGETARY CONSIDERATIONS

1. Budgetary restraints have now become a fact of life for all trainers. The costs pertinent to equipment, ammunition, transportation and logistic requirements must be carefully assessed before any training is undertaken. Since a lead-time is normally required before material support can be obtained, it is important that this support be requested when the annual training directive is planned, and that alternate plans are prepared in the event it is not available. For specialty training such as jungle or winter warfare, better training value may be achieved if the greater part of the training budget is used to get the troops to the proper environment. This can be achieved by reducing the expenditure of ammunition, using alternative methods of transportation, or by reducing the scale of equipment to be taken.
2. Financial budgeting begins at the unit level. Based on the annual training requirements, operational commanders should anticipate their annual budgets and adjust them as required throughout the training year. This aspect should be emphasized in officer training as it emphasizes the difference between each operational commander maintaining a fiscal responsibility as opposed to centralized, comptroller control. There is a very great difference between the two and it is preferable to retain fiscal responsibility with operational commanders.
3. During the fiscal year it is necessary to maintain effective liaison between senior and subordinate HQ on financial matters since any change in training policy or operations automatically has an effect on the budget. The information from senior HQ must be timely since changes on short notice will destroy confidence and good planning practices at the lower levels of command.
4. Based on training priorities, planning occurs concurrently throughout the chain of command and is coordinated by each HQ as the requirements of subordinate formations become known. The senior HQ responsible for the overall requirement can then make the final adjustments to unit and formation budgets.
5. Experience has shown that there will never be sufficient money to provide everything that is required for training. Units should improvise, as there is generally considerable talent at the unit level and excellent training aids can be produced locally. Soldiers will have to improvise on the battlefield and it therefore makes good sense to develop the instinct for improvisation at the unit level in peacetime.

ORGANIZATIONAL CONSIDERATIONS

6. In peacetime, war establishments are usually restricted. Commanders must adapt appropriately when this occurs. For example, there may be a battery missing in an artillery regiment or a squadron in an armoured regiment, or a service support unit may lack a particular field capability. The commander should ensure that this is known to all subordinates during

FTXs and take steps to improve the situation by either establishing radio communications to represent these sub-units, or by creating skeleton staffs which can produce the appropriate tactical and administrative information as required. This improvisation can be carried out quite adequately on exercises by small groups of officer and NCO controllers equipped with vehicles and radio communications.

7. To offset manpower deficiencies, the employment of the militia, either as individuals or as formed organizations, should always be considered by the regular force.

EQUIPMENT CONSIDERATIONS

8. Equipment in peacetime is not always available and often has to be pooled. When large scale exercises are held, equipment for control staffs, umpires, and observers may sometimes be difficult to provide. The size of the umpire and control staffs therefore should be kept to a reasonable minimum. During the annual training cycle it is often necessary for units to provide equipment for demonstrations or for other formations which were not included in the original training program. Formation commanders should establish firm priorities on the use of equipment to minimize the disruption of unit training plans.

AMMUNITION, EXPLOSIVES AND PYROTECHNICS

9. Emphasis must be placed on the creation of realism to stimulate interest on all training exercises. One of the many characteristics of battle is noise. Until soldiers are accustomed to the crack and whine of bullets and shells, it is difficult for them to think calmly under that stress. The extent to which such noise can be produced in training depends almost entirely upon the training ammunition, pyrotechnics and explosives available. Unfortunately supplies are usually small, and an atmosphere resembling battle is difficult to achieve. Operational commanders must therefore economize and determine when the best training value can be gained from the limited resources. Blank ammunition should be made available for all individual and crew-served weapons being used on an exercise.

TRANSPORTATION AND LOGISTICS CONSIDERATIONS

10. The movement of military equipment is expensive. It may be desirable to move a few priority equipments to an exercise area and arrange the loan of equipments from other units in the vicinity. This arrangement will be successful as long as the hand-over of equipment is properly controlled. The base nearest the training area should be contacted for support regarding such items as rations, POL, ammunition and engineer stores.

AIR CONSIDERATIONS

11. Air transport is generally in short supply in peacetime and demands for it must be made well in advance of planned exercises. The move of units and their equipment by air should be regarded as normal operations and must be included in the annual training budget.

12. Tactical air support must be requested and coordinated well in advance to ensure that it is available for the concentration.

13. Liaison between the ground and air staffs must be continuous during planning.

TRAINING RESTRICTIONS

14. Peacetime limitations, such as restrictions on digging, cutting trees and camouflage, movement off roads, or running vehicles at night without lights, must be carefully explained to all participating troops to prevent incorrect lessons being learned.

SECTION 7

THE REQUIREMENT FOR ALL ARMS COOPERATION IN TRAINING

ALL ARMS COOPERATION

1. All arms cooperation is vital in war and must be continuously emphasized in training. To understand this, the basic principle of fire and movement and its interrelationship in the all arms team must be understood.
2. Victory in battle is gained in part by reducing the enemy's determination and will to fight and that happens when the enemy's position is finally dominated. Successful operations are almost invariably the result of the combined effort of arms, air, combat support and service support units cooperating together.
3. The requirement in the combat team for mutual cooperation between infantry, armour and artillery is of first importance. The fundamental principle in infantry/tank cooperation is that whether tanks are in support of infantry or vice versa, neither will be committed to battle without the other. Equally important, neither should be committed without a properly planned artillery programme and tactical air support.
4. Speed between bounds and the ability to fire and move quickly shortens the time troops are exposed to enemy fire. When infantry are driven to ground, the direct fire from the tanks and neutralizing artillery fire called down by the FOOs come into play.
5. The combat arms might have differences of opinion on many subjects including those relating to doctrine and tactics, however, when the crisis comes on the battlefield, it is their mutual belief, loyalty and cooperation that is fundamental to winning battles. When everything else is weighed and rationalized, it is this tribalism which gives the combat arms their individual and combined strengths.
6. Cooperation is founded on a mutual understanding and respect which is achieved through the following practices:
 - a. Armoured squadrons should be affiliated with specific infantry battalions whenever possible. Similarly, affiliations of companies with the regiments should be established.
 - b. Outside attachments should be on the same basis as the armour/infantry affiliations, eg, artillery and engineer officers should return and work with the same units on each support mission.
 - c. Training together will provide the opportunity to work out coordinated drills and communications procedures based on knowledge of each other's requirements and capabilities.

- d. Frequent joint familiarization programmes should be established between arms units to indoctrinate all personnel in the basic tactics and equipment of the other arms. The indoctrination should include both day and night operations and should be extended to other units of the brigade group. Personnel exchanges, especially at senior non-commissioned officer (NCO)/junior officer level, are most effective.
- e. Every opportunity should be taken during and after joint exercises and operations to ensure that the point of view of each arm concerned is presented and discussed.

7. If Canadians have learned anything from war, it was that cooperation was one of the most important principles of success, and keeping a proper balance among the combat arms was vital to winning battles. Those responsible for training must ensure that the principle of all arms cooperation is emphasized during tactical training, and that operational units are given every opportunity to practise together on field exercises.

CHAPTER 3

LEADERSHIP

SECTION 1

LEADERSHIP

"Leadership is that mixture of example, persuasion and compulsion which makes men do what you want them to do. If I were asked to define leadership I would say that it is a projection of personality. It is the most personal thing in the world, because it is just plain you."

Field Marshall Slim

GENERAL

1. Leadership can be defined as the art of influencing human behaviour so as to accomplish a mission in the manner desired by the leader. There is however, a basic factor which separates military leadership from leadership in everyday situations; that is the fact that the military mission is never the fulfilment of a personal ambition. The development of the military leader must primarily concern itself with leading and training men for war.
2. There is a cliché that leaders are born not made. On occasion this may be true, but a study of history shows that more people learn leadership than are born with it and the intricacies of leadership can only be learned by actually leading soldiers.
3. General Slim stated that the fundamental qualities which distinguish a leader from other men are courage, will-power, initiative and knowledge. He submitted that if people did not have these qualities, they would not make good leaders. If they did, they would. Individuals who possess these qualities however will not necessarily be good leaders. They must have one more quality - unselfishness - the old Christian virtue of loving your neighbour, your men, a little more than yourself. If they have this quality, their leadership will be enduring.

QUALITIES OF THE LEADER

4. The following paragraphs deal with the qualities required of a leader and the training needed to develop these essential personal qualities in both officers and NCOs.

5. **Courage.** Leaders must not only be braver than their men, they must be braver for longer periods. Courage is easily exhibited in victory, but leaders must be brave under conditions of hardship, loneliness, and perhaps most difficult of all, in periods of inactivity and boredom. In addition to physical courage, leaders must have moral courage. To insist upon the fulfilment of an order which they know to be right when there would appear to be an easy way to avoid the issue, is often much more difficult than an exhibition of physical courage.

6. **Willpower.** The task of leaders is to make decisions and then to carry them through against all opposition. There are many times when resistance may come not only from the enemy, but also from their soldiers or from their own physical or mental exhaustion. On the other hand, there is a great difference between willpower and obstinacy or inflexibility. Leaders must establish the fine balance between the two.

7. **Initiative.** Leaders must not only be several moves ahead of their enemy, but also several moves ahead of their soldiers. In modern war there are no fixed answers to the scope of problems which face leaders at all levels. In these days of rapid changes in weapons, operational situations and tactics, the ability of leaders to react appropriately to widely differing situations is essential. Ultimate success on the battlefield will always depend on the personal initiative and the resolution of junior leaders and their troops to accomplish the task at hand.

8. **Knowledge.** Unless leaders have an entirely sound knowledge of tactics, equipment and doctrine they cannot expect confidence from their soldiers. They must also have complete knowledge of their soldiers to ensure that they get the best out of each one. Junior commanders should keep platoon books or equivalent, with confidential information concerning each individual in their command. This will ensure that they have that background and knowledge to influence and assist their soldiers in difficult situations.

9. **Unselfishness.** Unselfishness in leaders simply means putting the honourable completion of the task first, the safety, well-being and comfort of their soldiers second, and last, and always last, their own interest, safety and comfort.

10. **Man-management.** Once soldiers realize that commanders are genuinely concerned with their welfare, they will respect them. Man-management must be taught and discussed at every stage of the training of officers and NCOs.

11. **Example.** Leaders are generally in front of their men, whether on the parade square or in the attack. They are always in the centre when orders are being given and decisions made. Although personalities will differ, cheerfulness and the capacity to affect others with their own enthusiasm are two of the greatest assets leaders can have. They must be decisive and when giving orders they must be forceful and clear. Even a poor plan if carried out with determination is better than no plan at all. All troops must be imbued with an offensive spirit and have a strong desire to get at the enemy and defeat him. This will only come from leaders who set the example. The simple explanation is that leaders must be the source of strength in their unit and they must be prepared by personal example to show their men that when everything seems hopeless and lost, another effort is still possible. Those who lead with determination, initiative and example do not have time to take counsel of their fears, therefore no situation is ever quite as hopeless as it

may seem. By example, leaders instil discipline, and the highest standard of discipline is needed to stand the test of war. Leaders must first discipline themselves and maintain a consistent behaviour among their comrades before they can expect their soldiers to maintain a high standard of discipline.

12. **Loyalty.** Loyalty to one's subordinates is as important as loyalty to one's superiors. Leaders cannot expect loyalty from those under them if they are constantly criticizing the actions of superiors. Conversely, leaders must never take shelter behind the mistakes of their subordinates. When plans for which they are responsible fail, or mistakes are made by their subordinates, they must accept the responsibility.

13. **Decision making.** All leaders must learn at an early date how to make simple estimates so that when situations arise unexpectedly, as will usually be the case in war, they are capable of analysing the problem quickly, coming to a proper conclusion and selecting the correct course of action.

LEADERSHIP IN TRAINING

14. Leaders are the trainers of their soldiers. In peacetime there is a tendency for the NCOs to do the majority of the instructing since officers are often involved in unit administration or secondary duties. Under wartime conditions both officers and the NCOs share the instruction. They are sent on instructor courses and come back to their units to teach their soldiers. This principle is sometimes difficult to maintain in peacetime but it remains a goal for which commanders must strive.

15. Confidence and experience in leadership is gained by training one's own soldiers. Through instructing, leaders have a good opportunity to get to know and understand their soldiers. It also makes leaders technically proficient in each military subject.

16. Leaders must display moral courage when training their soldiers to ensure that training is not compromised when there is no senior to oversee them. Through determination, they must ensure that soldiers are trained despite the setbacks and interruptions caused by the daily military routine or the absence of some of them due to other duties. Through initiative, they can plan their training flexibly so that the maximum number of individuals benefit.

17. Without professional and technical knowledge leaders cannot teach effectively. Without the detailed knowledge of their soldiers they cannot know how each will learn best. Leaders must unselfishly give of their own leisure time to prepare lessons to ensure that they will be effective.

18. Obviously, an officer or NCO cannot be an expert in all the weapons and equipment of a modern army, but they must understand the characteristics and principles of employment of the different weapons used by their soldiers. They must also understand the strengths and limitations of the support weapons within the unit and those in support of the combat team.

CHAPTER 4

TRAINING THE RECRUIT, NCO AND OFFICER

SECTION 1

THE DEMANDS AND QUALITIES OF A SOLDIER

DEMANDS ON A SOLDIER

1. A soldier must be trained for all types of conflict, from nuclear war to mid-intensity war; from counterinsurgency and internal security to peacekeeping. The same unit and the same soldiers may, for example, move from training with NATO units back to Canada for peacetime duties, then to exercises with the Ace Mobile Force (Land) or the NATO Composite Force (NCF) in Norway, followed by a tour in the Middle East or Cyprus. As this sequence could be accomplished within a period of a few years, it is obvious that individual training must be extremely flexible. Soldiers must be physically adaptable to changing conditions of terrain and climate, and they must be mentally adaptable to different operational roles.
2. History has shown that counter-insurgency and internal security operations seldom give the soldier the "satisfaction" of conventional warfare. There may not even be an enemy in the accepted meaning of the word. This places a great strain upon soldiers' patience and perhaps upon their understanding of why they are being employed at all. In these situations, platoon and section commanders often find themselves in the position of independent command and are required to make immediate and responsible decisions without the benefit of advice from their superiors.
3. The soldiers will and capacity to work under the conditions outlined above can only be maintained at a satisfactory level by:
 - a. good leadership, particularly at platoon and section levels;
 - b. training which is imaginative, flexible, realistic and effective;
 - c. thorough knowledge of the current situation;
 - d. good discipline;
 - e. adequate and flexible administration; and
 - f. good equipment.

QUALITIES OF A SOLDIER

4. The main natural qualities required of a soldier that must be developed in training are:
 - a. courage;
 - b. loyalty;
 - c. discipline and patience;
 - d. fitness and endurance;
 - e. adaptability; and
 - f. self-respect.

As has been discussed earlier, many of these qualities are inherent in most people but have not been fully developed. A few individuals are deficient in one or more of them and will never become good soldiers, and could become a serious liability in operations. They should not be given the opportunity to serve in the army in peacetime, and must be identified as unsuitable and discharged during their basic training period.

5. Leaders should always direct the individual's military training towards developing these qualities. In addition, all soldiers must possess:
 - a. professional skill and confidence;
 - b. confidence that their training has made them ready for combat;
 - c. an understanding of their responsibilities in the military profession;
 - d. pride in their unit; and
 - e. motivation towards the military way of life.

6. All of these qualities contribute to the moral, mental and physical attributes of the soldier and are interdependent. For instance, courage is enhanced by loyalty to comrades, by skill in handling weapons and confidence and pride in the unit. These qualities, which are very similar to the qualities of a leader, are described in more detail in the following paragraphs.

7. **Courage.** Courage is a quality inherent in every human being in varying degrees, but it can be fostered and strengthened with the development of character. Fear is often based on lack of confidence when facing unknown situations. Recruit training must, at some point, force soldiers to deal with situations which initially induce fear in them, or at least force them to do more in physical terms than they believed was possible. It is the responsibility of the trainer to ensure that the recruit course includes a fairly wide spectrum of the above situations so that the

maximum number of individuals face situations which are a personal, emotional and physical challenge. It takes extremely effective leadership in training to identify each individual's weaknesses and fears, to set the challenges and to guide the individual through them. The end result is soldiers who have gained the self-confidence to overcome their fears.

8. **Loyalty.** No team can work efficiently without loyalty and a soldier generally works in a team. An inherent sense of loyalty to their leaders and their peers must be developed. At the same time, individuals are entitled to expect loyalty from their leaders and peers. This is the team spirit required for war and all forms of training must include situations which stimulate it.

9. In addition soldiers must have faith in their job or position, in the team and in their leaders. This can only be achieved if they are well led and if they understand what is required of them.

10. Regimental history and traditions play a most valuable part in developing loyalty in a unit. They must be taught as a guide and challenge for the future rather than as a sentimental record of the past. History starts from yesterday and a young soldier is more likely to be inspired by a description of events which have happened recently than with those far in the past.

11. The regimental system is based on giving soldiers a home, a regimental family of which they are proud and an environment in which things are done in a unique or peculiar way, which sets the unit apart from others. This military way of life provides individuals with a particular identity and establishes pride, loyalty and trust in their comrades. Regimental spirit is developed in unit lines, living quarters, the museum and by the sharing of military experiences. Good dress and deportment, saluting, regimental sports and competitions, and good drill and ceremonials are all contributing factors. Strong regimental spirit produces an aggregate strength which far surpasses the sum of individual strengths.

12. **Discipline and Patience.** Good discipline entails the subordination of one's own interest to the common good. Discipline may be either imposed from without or developed from within. An army requires both kinds but the latter is more valuable as it will govern behaviour when soldiers are not directly supervised.

13. Self-discipline can be learned from the example set by good leaders and in time, it becomes a habit. Imposed discipline must be just, impartial and effective, and understood by the recipient.

14. Poor discipline and bad behaviour are generally most evident in periods of boredom or where there is a lack of leadership and supervision. A good leader will realize this and react accordingly by ensuring that soldiers are kept busy through a balanced training programme. Nevertheless, the quality of patience is extremely important and it can be developed in training if the soldier is always told why the tempo of events has slowed down. There is a tendency in the profession to "hurry up and wait" and this must be resisted.

15. Patience and restraint are invariably required in internal security and peacekeeping situations where the military must win the confidence of the civilian population or opposing factions, even though certain elements will contain the very people who are creating the problem. Impatience, followed by acts of injustice towards civilians, can quickly jeopardize the success of the operation.

16. **Fitness and Endurance.** The standard of physical fitness and endurance of recruits on enlistment is generally below the requirement. Soldiers must be hardened for the training which will follow. Reasonably fit individuals who for example, play baseball for their unit, may still not have the powers of endurance to fight for long periods in the extreme weather conditions while carrying most of their needs on their backs.

17. However, physical training can be overdone. Like athletes, soldiers can become tired and stale if their physical fitness is over-emphasized. The aim must be to maintain a good standard of physical fitness, and then increase endurance training for particular operations.

18. It is equally important, and perhaps more difficult in peacetime, to develop alertness, perseverance, tenacity and determination to succeed. Good leadership, competitive sports, demanding field exercises and adventure training involving an element of danger and discomfort will always help to develop these qualities.

19. **Adaptability.** As has been discussed earlier, Canadian soldiers in peace and war must be adaptable to changing operational situations and conditions. They can no longer expect long and uninterrupted training cycles for a conventional set of operations. If they are married, they must learn to accept sudden, and perhaps frequent, separations from their families. There is no set training formula for developing this quality. Good leadership, interesting training, and an understanding that their dependents can get assistance from the unit or base when they are away on duty will help to reassure them. They must learn to like the military profession, and it, in turn, must motivate them and satisfy their personal expectations.

20. **Self-respect.** Self-respect is perhaps a mixture of most of the other qualities mentioned above. Certainly it contains elements of moral courage, discipline and loyalty. It can be developed by increasing soldiers' confidence in themselves as professionals, their loyalty to their team, crew or unit and by giving them a thorough understanding of their tasks. Without self-respect soldiers are liable to fail both themselves and their comrades when not subject to immediate discipline and leadership.

RECRUITING

21. The demands on, and the qualities of, a soldier have been discussed. The selection of potential leaders and soldiers and their subsequent training must focus on these qualities. Although recruiters may have difficulty in identifying these qualities in individuals, it is important that they take them into consideration when applicants are being assessed and enlisted. A brief review of a recruit's background at school, in sports, and possibly in the scouts, cadets or the reserves, can give the recruiter a reasonable assessment of the individual's personal qualities.

SECTION 2

TRAINING THE RECRUIT

GENERAL

1. The principles of basic training were discussed in Chapter 2. The purpose of the basic training conducted at the recruit schools is to develop recruits mentally, physically and spiritually for the Canadian Forces, and to give them a grounding in general military skills which will prepare them for their individual trades training.

2. When recruits join the recruit training school, it is their introduction to the Canadian Forces and as such, it will have an immediate and lasting impact on them. There are few recruits who do not vividly remember their first few weeks of training. They will bring with them their own personal problems from civilian life. These problems are important to them and their leaders must make the effort to solve them through good advice and guidance. At the same time, recruits must be made to realize that they are now members of a team, and that their actions will affect others just as their actions will be affected by others. New soldiers must be firmly introduced into a military routine which forces them to abide by regulations for discipline and daily routine. Recruits should be continuously briefed from the first day onwards and handled firmly but sympathetically, since the aim is to make them understand what is required of them and why. To accomplish this, the training organization at recruit schools should be balanced with officers and NCOs in approximately the same proportion as recruits will find them when they join their units. If recruit squads or platoons are too large and do not have the proper complement of officers and NCOs to command and instruct them, then the standard of training is bound to be lowered. The relationship between the officer and NCO must be fully understood and apparent from the first day recruits join the school. Normally, recruits should be made up into platoons of approximately forty, with an officer, a senior NCO and assistant NCO instructors under each platoon commander.

3. Basic training must be purposeful, interesting, and physically and mentally challenging. The tempo must be adjusted so that the bright recruit is not held back and the slow recruit is not left behind. They must never be allowed to become bored. On the other hand, recruits must never feel that the training is beyond their capabilities. If they do, they will never gain the self-confidence needed to become good soldiers. The training must be balanced between practical exercises and theoretical classroom instruction. Before recruits get very far into the basic course they must be physically conditioned to allow their instructors to determine whether or not they will stand up to the rigorous training which is to follow.

4. Leisure hours, sports and recreation require special consideration. In part, good organization will enable the recruits to make good use of their free time. On the other hand they must be allowed some free time to do what they want without supervision. They should be allowed certain privileges as they successfully complete each state of training. The army is based on a regimental system and those recruits who are enlisted in the army must understand this when they enter the recruit schools. Although there is a vast difference between the military family and their homes, there are also many similarities and they must be made to understand that they will be assisted in their military careers as long as they apply themselves and are willing to accept the sacrifices along with the rewards.

SUBJECTS TO THE COVERED

5. Some of the important subjects for the soldier are:

- a. customs of the service (organization, dress, deportment and military law);
- b. physical conditioning and sports;
- c. drill;
- d. weapons training, weapons handling and range work;
- e. fieldcraft and living in the field;
- f. map reading;
- g. personal hygiene (health training, first aid);
- h. character training; and
- j. language training and education.

6. **Customs of the Service.** Recruits must understand the various customs of the service. The soldier must have a general knowledge of the organization of air, land and naval forces, and their roles in peace and war. Soldiers should be given a short history of Canada's Armed Forces and its national heroes so that they can understand our military traditions and why national days, ceremonies and parades are used to honour these traditions.

7. They should also have an understanding of basic military law, the reasons for it and the authority vested in NCOs and officers who are empowered to enforce it. Instruction in military law should be done using a simple format so that it is easily understood and sufficiently interesting to encourage discussion. Recruits should understand the military regulations dealing with charges and the manner in which they have been developed to ensure that the ends of discipline and justice are served. Recruits should also realize that the application of military law should not affect the relationship between the commander, who applies the law, and his subordinates, to whom that law has been applied. Once recruits understand the law and the reasons for abiding by it, they will be in a better position to regulate their personal conduct.

8. Recruits standard of dress and deportment must be closely supervised during the early training period and they must understand that this standard is required throughout their careers.

9. **Physical Conditioning and Sports.** Physical training should bring a recruit's physique to the standard required for operational service. At this stage in their training, physical conditioning is a most important factor because they should understand that they must keep themselves in good physical condition throughout their careers. They must understand that the military profession is demanding and that war is hard and any soldier who is not physically fit will not survive in battle. Games and sports are useful and popular, and should always be played on a competitive basis. Many recruits have never played games or participated in sports and thus require coaching. The aim must be to reach a good standard of fitness which can be developed by special training when recruits join their units. They must learn to swim and swimming instruction should be emphasized.

10. **Drill.** Drill is designed to instil pride, develop good military bearing, sharp turn-out, esprit de corps and good discipline. It is a useful antithesis to field training and a good basis for developing team spirit and encouraging competition. On the other hand if drill parades and the preparation for them are overdone, the whole purpose of including them in the syllabus will be self-defeating. Drill, like everything else in the military, must be practised, and officers as well as NCOs should give the instruction. It conditions individuals to react to command quickly and in battle this can save lives if soldiers become trained to react automatically. Since officers and NCOs are with their soldiers on drill parades, this gives them an opportunity to assess such personal qualities of their soldiers as discipline, patience, fitness and endurance. If parades are done well, soldiers are proud of their effort and unit morale will be enhanced. The standard of saluting in a unit is always a good indication of its standard of training and discipline, and also the degree of pride soldiers have in their profession.

11. **Weapons Training, Weapons Handling and Range Work.** The aim of weapons training is to teach recruits to confidently and skilfully handle all the weapons which they will use as trained soldiers. Instruction must be interesting and progressive and field firing should be integrated as far as possible, with instruction on fieldcraft and minor tactics.

12. Range work must aim at producing soldiers who can handle their weapons and hit a figure target at 300 metres. Range practices should be closely supervised to ensure that recruits understand the fundamentals of shooting. Once they have mastered the art of shooting, recruits should strive to reach the standard of marksman and then to adapt to operational shooting

conditions such as jungle lanes and combat shooting. Recruits who handle their weapons confidently are likely to retain a keen interest in shooting teams. Low-level competitions within the unit will generate interest and help to develop higher shooting standards.

13. Recruits from all military occupation codes (MOCs) must learn to shoot and maintain their weapons. It is equally important that they learn:

- a. safety precautions when carrying weapons and ammunition for prolonged periods; and
- b. the securing of weapons against theft.

During internal security operations soldiers may find themselves having to live, fully armed, in close proximity to civilians. Under these circumstances safety and security are of particular significance.

14. **Fieldcraft Training.** The aim of fieldcraft, in conjunction with any tactical training, is to teach recruits to become strong members of the all arms team. They must learn the basic fundamentals of fire and movement, observation, judging distances, digging, camouflage and concealment and living in the field. Recruits must be taught how to make best use of cover in a fire position, and how to move with their weapons and equipment when covered by supporting fire. These lessons, if correctly taught during recruit training, will never be forgotten.

15. Whenever fieldcraft training is undertaken, the instructors must focus their instruction on the likely battlefield and realistically relate their instruction to it. Recruits must never lose sight of their principal function which is to engage and kill an enemy. This requires instructors who are imaginative and who understand tactics. The fundamental tactic in fieldcraft is fire and movement. Recruits must master this battle drill and be capable of performing it under all battle conditions.

16. **Map Reading.** Every recruit should be taught how to set up a map and understand conventional signs. The majority of this training can be carried out in the field. It can sometimes be done in conjunction with range practices when soldiers are waiting to shoot, or during pauses in fieldcraft training. The recruit must also be taught how to use a compass.

17. **Personal Hygiene and First Aid.** Recruits must learn the principles of health, first aid and hygiene in the field. They must be taught to keep themselves clean, and how to care for their feet. They should learn the fundamentals of keeping warm in the Arctic and the dangers of becoming overheated in warm climates. They must understand sanitation in the field. They must practise living in a slit trench or bunker and learn how to keep themselves comfortable under these conditions.

18. Their battle first aid training should be simple, and must include how to treat for shock, and how to stop bleeding. They must learn to apply shell dressings and how to evacuate casualties. Recruits should swim sufficiently well to apply the art of lifesaving and must learn how to give mouth-to-mouth resuscitation.

19. **Character Training.** To broaden their knowledge, recruits should be given special periods by their platoon commanders on various subjects of interest. National affairs, citizenship, Canadian history, and a general outline of Canada's role with the United Nations and NATO could be included. Religious training must be provided by the chaplains who must be given the opportunity to provide the moral guidance vital at this stage in a recruit's life. Recruits must be given the opportunity and encouraged to attend church services to develop their own religious beliefs. Although religious training is on a voluntary basis, anyone who has had experience in battle knows there are very few atheists on the battlefield.

20. **Language Training and Education.** Language training is available for some recruits and they should be encouraged to take advantage of this opportunity. Once recruits are posted to their unit, academic courses are available either on their own time or under supervised instruction. Eligible recruits should be encouraged to attend these academic courses when possible.

21. At the end of recruit training soldiers will not be fully trained. They have learned basic skills and, above all, they have the knowledge, the motivation and the ability to become true professionals. If they do not meet the training standard during the basic training stage, then they must be failed and discharged. Soldiers should not be transferred to a school or unit for further assessment if they have already failed basic training.

SECTION 3

TRAINING THE NON-COMMISSIONED OFFICER

UNIT RESPONSIBILITIES

1. Unit commanders are responsible for the selection and training of their NCOs. Some NCOs have a flair for leading and get good reports, while others may be slow starters, or may not have had the opportunity to display leadership qualities in the field. Within each unit there should be a good balance between young, keen, enthusiastic leaders and those who may not have had the same academic background, but have considerable regimental experience. It is important to understand that every NCO of the rank of Master Corporal and above should be considered a leader. NCOs remain with their parent units for longer periods than do the officers and therefore they become the backbone of the unit. The aim of every commander should be to maintain a balance of youth and experience among his NCOs.

2. **Junior NCO Training at the Unit.** Unit commanders must ensure that there is sufficient potential for selected young soldiers coming up the line to become junior NCOs in their units. They are also responsible for the training of the more experienced and senior NCOs within their units. The training of the junior NCO is done at command schools and, in the case of the army, qualification is obtained by successful completion of either the Junior Leaders' or Combat Leaders' Course. The unit should always attempt to conduct pre-courses whereby prospective NCOs are properly prepared and assessed, giving those who are finally selected for the course a better opportunity of success. The aim of this pre-course is to give potential NCOs confidence in themselves, and emphasize the leadership qualities required of them as junior NCOs.

3. The syllabus for the Combat Leaders' course is designed to emphasize leadership and instructional ability. The following subjects should be included:

- a. qualities of a leader and practical leadership training;
- b. responsibilities of a junior NCO;
- c. methods of instruction;
- d. discipline and how to administer it;
- e. weapons training and target grid procedure;
- f. minor tactics, control of fire, fieldcraft and night fighting;
- g. drill and drill instruction;
- h. military law;
- j. administrative duties and interior economy;

- k. helicopter indoctrination and loading drills; and
- m. preparation of lesson plans and a simple individual training programme.

4. Once promoted, the junior NCOs should be given the opportunity to instruct and practise leadership by being assigned responsibilities in the daily routine of the unit. This will build their confidence and allow supervisors to properly assess abilities. Once this has been done and experience gained, junior NCOs should then be given the opportunity to attend a course at a branch school. This gives them additional confidence, technical knowledge and experience in instructing and leading. As well, the course provides the unit commander an opportunity to judge their standard against other NCOs in the unit. Periodically thereafter, NCOs will require refresher courses to upgrade their military knowledge and qualify them for further promotion.

5. In field formations the best way of upgrading the NCO's general knowledge is to periodically conduct either unit or brigade courses. These include drill and duties, tactics, administration, leadership, support weapons, field engineering, introduction to new equipments, and helicopters.

6. History has shown that in war NCOs are called upon to do a considerable amount of leading, especially when officers become casualties. Commanding officers should ensure that their NCOs are as well trained in tactics as are the officers, so that at a moment's notice they are capable of taking command. It is by training together that this can best be accomplished.

7. The best training for NCOs is looking after their soldiers under conditions similar to operational service. The more NCOs are in the field conducting realistic training with their soldiers, the more their qualities of leadership will be developed.

8. The most difficult, and yet the most important, aspect of NCO training is to ensure that NCOs understand their responsibility regarding leadership. It is important that they be given opportunities to lead, and not be given jobs which can be done by those subordinate to them. In peace, there is an inclination to assign responsibilities and duties to senior NCOs which could easily be done by those much more junior to them. Lord Wavell stated: "Every time two or more soldiers are marched under a Lance Corporal to perform some duty that they should be perfectly capable of performing by themselves, something of their independence is destroyed, quite apart from blunting the edge of a perfectly good Lance Corporal."

SECTION 4

TRAINING THE SENIOR NCO AND WARRANT OFFICER

TRAINING RESPONSIBILITIES

1. As a general rule, warrant officers (WO) and above have considerable knowledge of their particular trade, a good understanding of administration and are good leaders. However they do require continuous upgrading. It is too often assumed that the promotion to WO rank is the culmination of an NCO's military training.
2. WOs are the second in command of a platoon or equivalent, and are the senior tradesmen. In the combat arms they are trained as a leader as well as an administrator. Additionally they must be competent instructors and understand the technical and administrative principles within their particular command. If they are to be qualified to take advantage of promotion, they must be properly trained in advance. Unless they are updated in military knowledge and skills, they cannot play their part in the unit chain of command.
3. Senior NCOs play a vital part in battle. Some have commanded successfully in war at the company level. Battles have been won with only an officer and a handful of NCOs leading the troops. In battle, the resupply of ammunition and supplies is handled primarily by the senior NCO at the unit level.
4. Unless senior NCOs are given the opportunity to attend officer training periods, and are trained in tactics, they cannot be expected to carry out the duties of their immediate superiors in an emergency.
5. Senior NCOs should be taught something of the workings of every department within the unit above their own particular appointment or trade. This is probably more a truism in a combat unit than others, however background experience produces original and sound ideas on training, trade proficiency and administration. As a general principle, in the combat arms WOs should be trained to fill appointments one up to create a reserve of leaders and specialists. In this way, provision is made for the replacement of those who are released or become casualties in war. Commanders must ensure that the training of senior NCOs is not neglected during the annual training cycle.

SECTION 5

TRAINING THE OFFICER

GENERAL

1. Officers' basic training is the initial step in preparing them to take over their first command. In general terms they should be taught from the bottom up. Their training should begin in much the same way as a private soldier's and then progress through various responsibilities within the sub-unit until they are capable of commanding one. They must learn to accept discipline before they are given the authority to impose it. They must experience the uncertainty and difficulties of moving from the civilian environment to the high refined and demanding military profession in order to really understand their men. They must be challenged and exposed to pressure, and prove that they have the moral fibre to lead other soldiers before they are given positions of authority. Above all, they must understand the responsibility for leadership that comes with a commission. As leaders, they will have to volunteer themselves in peace and war completely, accepting the sacrifices equally with the rewards and privileges which will gradually accrue.

2. Motivation towards the profession is the one factor which potential officers must display early in their training. It is vital that the challenges and demands of leadership which are inevitably placed on officers are clearly defined and understood at the outset of training. Individuals who are not prepared to devote themselves totally to becoming professionals, or who are not prepared to accept the challenges of having their abilities tested in battle when the lives of their men are at stake, must be eliminated early in their training. As General Sir John Hackett stated in his article on the Profession of Arms: "The military institution is dominated by an unwritten clause. This sets out an unlimited liability. It requires of a man that he be prepared to surrender life itself, if the discharge of his duty demands it. This is not often invoked in peacetime, but its existence lends a dignity to the military condition which is difficult to deny, and this is where the profession of arms separates itself from any other profession."

3. It is easy to study and understand the qualities of leadership, but leading is doing, and it is the result that counts. During the early phases of training it may seem impossible for young officers to meet all the leadership criteria at any one time. They must realize that their ability as a leader will gradually improve with experience. As they are exposed to and meet new challenges, they will gain the confidence required to project their personalities and lead competently in their first command positions.

4. Instructors in all phases of officer training must ensure that each young leader is given sufficient opportunities to get out in front and instruct on their own. Instructing is the best method of gaining confidence because individuals are subject to close scrutiny both in terms of their ability to inspire others and in their knowledge of the subject.

5. Young leaders should understand that battles are won by small unit action, and that leaders at the platoon and company grade bear the brunt of the load. Experience has shown that soldiers can carry a poor unit commander for a while in battle, and much longer in peacetime, but a weak platoon commander will not last a day in battle, because the soldiers will find out immediately. Successful leaders are those who lead from the front. To influence the battle they must be in a position to observe the action and make sound decisions quickly based on what they see. The training of the officer must emphasize this point.

JOINING THE UNIT

6. Newly commissioned officers require careful guidance and encouragement when joining their units and it is the responsibility of all unit officers to ensure that they get it. Initially they should be advised to feel their way cautiously and seek the advice of those with more experience. They should find that, besides their fellow officers, unit senior NCOs will provide a great deal of valuable advice and will take pride in assisting a young officer who approaches them frankly and with respect. To gain this respect they must weigh advice, but make their own decisions.

7. They should be inquisitive and take every opportunity to expand their knowledge in all fields. Training is the time to learn and in order to learn the young officer should not worry unnecessarily about making mistakes. The important thing is to learn to correct them. It is easy enough to admit mistakes, but this should not be used as the prime excuse every time something goes wrong. There are generally other reasons why mistakes are made by junior officers.

8. Junior officers must be given the opportunity to gain the practical experience of regimental soldiering by commanding a platoon or equivalent once they have joined the unit. They should not be required to leave the unit for further education or extra regimental employment until they have become competent junior officers. It is at this stage that they will be broadening their base of experience and it is only through having the opportunity to lead and instruct their soldiers that this can be developed. After command experience, they must be encouraged to improve both their military and academic education with a view to promotion. If their initial command is interrupted and they have not been given the opportunity to practise the essentials of leading or to gain a sound knowledge of the responsibilities of their rank, they will have suffered an important gap in their training which may adversely affect them throughout their careers.

9. Newly commissioned officers should train their soldiers, and the best way of doing this is to personally take on a good proportion of the instruction. This gives them confidence as they are exposed to human behaviour in the classroom and in the field. Also, the officer learns the various military subjects, such as tactics, weapons, drill and organization. There is an erroneous impression in peacetime that a formal course has to be taken by individuals for them to become a capable instructor. This is not so, as intelligent leaders can study publications, observe others instructing, prepare themselves thoroughly, and then teach. This method of training young leaders at both the NCO and officer level was used successfully in war and may be the only practical method which will be successful when large numbers of soldiers are enlisted on mobilization.

TRAINING RESPONSIBILITIES

10. The ultimate responsibility for training unit officers remains with commanding officers and they establish the unit policy to ensure that their officers improve their military education and are qualified for promotion when that time comes. The ultimate responsibility for preparing for examinations rests upon the officers themselves. In addition to the assistance they get from their unit, officers may also receive assistance from courses which are centrally organized at brigade level on such subjects as tactics, military history, military law, current affairs and administration in the field. Officers must improve their military education by studying for and writing the officer professional development examinations.

11. Commanding officers should establish "Officer Days" and detail their junior officers to give lectures on subjects of interest. A lecture which is followed by a general discussion can be a useful follow-up to compulsory reading. At the same time, arrangements should be made for qualified lecturers to visit the unit to speak on subjects of military or general interest. This is a unique and easy way to impart knowledge and it stimulates interest among both officers and NCOs. It is of value to allow ample time for the audience to question the speaker as informally as possible.

12. Well-organized officer days can be used as a forum to discuss and teach many subjects, including tactics, organization, administration, command and control, and communications. Operational commitments using models can be explained to the officers and unit SOPs established. Commanders can organize TEWTs for their officers and use this time to expand their knowledge of those subjects which require emphasis.

TACTICAL TRAINING

13. All officers should have a good knowledge of military tactics and combat arms officers must be experts. One can learn a great deal in the classroom using cloth models. However, one of the most effective methods is for the commanding officer to take junior officers away from their routine tasks on officers' days and give them tactical instruction. Included with the officers should be some senior NCOs. TEWTs can be very simple and carried out without much preparation as long as the directing staff is experienced. By walking the ground, a series of practical problems can be developed against a realistic background. This type of TEWT usually takes the form of a series of questions which essentially ask the students: What Do You Do Now? Considerable interest and discussion can be generated from this type of exercise since quick reactions are required.

14. As discussed in Chapter 2, one of the most important tactical principles which all leaders must learn and understand is the principle of fire and movement. Most soldiers are weaned on it during their basic training as it is the fundamental drill for military operations. Its proper application involves infantry and armour, supported by artillery and air, as the basis of land combat. It is the fundamental principle of fighting, and it needs constant emphasis in peacetime training.

15. As far as infantry and armoured officers are concerned, they can never learn too much about the employment of artillery and air. Officers should understand that artillery, employed properly, stabilizes the battlefield. As tactical commanders, they must learn to use the artillery's inherent flexibility and understand the employment of tactical air. They should realize how much firepower is available at the end of a radio set.

16. Combat arms officers should train together with Field Engineers and understand the increased mobility which the latter can provide, especially when mechanized forces are employed. They should become familiar with the flexibility which Signals provides and the methods of obtaining support quickly from other supporting units and tactical air.

READING AND WRITING

17. Junior officers should be encouraged to read widely, ranging from military history to daily newspapers. They should endeavour to keep abreast of scientific and technical progress and military trends, particularly the introduction of new weapons and tactics. The Combat Training Centre produces a number of good periodicals on Armour, Artillery and Infantry. The Canadian Defence Quarterly also discusses pertinent issues. These should be read and officers should be encouraged to submit articles for publication.

18. Every officer should be proficient in military writing. Good grammar and style is the basis of all writing and when an officer attends the Staff School and Staff Colleges effective writing will be emphasized. Military writing should be practised before this happens. A compulsory program of writing essays and military papers during officer training at the unit is an excellent method of improving proficiency.

19. **Estimates and Orders.** Military estimates and orders follow a standard format. The rules to be followed are found in B-GL-303-002/FP-000, Operational Staff Procedures, Volume 2, Staff Duties in the Field. Junior officers should become familiar with this publication.

ADVANCED TRAINING

20. Officers will expand their professional knowledge by attending schools and colleges in Canada and other countries throughout their careers.

21. Most officers will attend the Canadian Forces Staff School, and subsequently, officers will develop their professional knowledge at the Canadian Land Forces Command and Staff College, the Canadian Forces College, the National Defence College or at military colleges in other countries.

22. Some officers may be selected to attend universities to obtain degrees, or for post graduate training. Others should be encouraged to improve their academic knowledge by taking courses when they are stationed close to a university or through correspondence.

23. Officers should never stop seeking to learn throughout their careers.

CHAPTER 5

MOBILIZATION AND THE MILITIA

SECTION 1

BACKGROUND

"No man ever entered upon a more uncharted sea than does the average human being in the twentieth century. Our ancestors knew their way from birth to eternity. We are troubled about the day after tomorrow.

Walter Lippman

GENERAL

1. As is the case with most allied armies, the structure of the CF reflects a compromise between the capability to meet current defence commitments and the requirement for economy. These commitments include the maintenance of an adequate base for mobilization should the Government decide to do so. The Reserve Force is tasked to support the Regular Force and provides a reserve of trained personnel to bring the Regular Force to war establishment levels and, along with the Regular Force, provides the basis for an expanded force should the requirement arise. On mobilization, operational roles may vary from internal security to high intensity international conflict, therefore from an army point of view, the militia should be oriented to developing and maintaining a general purpose combat capability.
2. The first requirement is to ensure that fully trained and disciplined militia forces exist in adequate numbers in peacetime so that they can readily take their places with the Regular Force when required. In peacetime, militia training standards are based on the minimum acceptable military skills and knowledge required to be operationally effective. These standards form the basis of mobilization standards in the event of an emergency. The same standard is required for the same task, whether it be done by the militia or Regular Force soldier.
3. In the same context, establishments, equipping policy and doctrine for militia will parallel as closely as possible that of the Regular Force. A Total Force theme will be dominant.

SECTION 2

PRIORITIES OF TRAINING

FACTORS FOR CONSIDERATION

1. Militia units must have sufficient time, modern equipment and competent instructors to reach satisfactory standards. The priority on training should be at section and platoon level equivalent. In principle, field training should not go beyond company level until a satisfactory standard has been reached at the sub-unit. The aim should focus attention on training the militiaman first as a trained soldier, then as a member of a team.
2. Commanding officers of militia units must stress instructor training so that the unit has a capability to train itself. The Regular Force can assist in the training of militia instructors and in the preparation of unit courses, however, they should not take over the responsibility of the commanding officer, who must ensure that his unit instructors carry out the bulk of the training themselves. Leadership, techniques of instruction and tactical training should be emphasized and considerable use made of cloth models or sand tables and simple TEWTs. When training follows this pattern, the standard of instruction and leadership within the militia unit are improved.
3. Since weapons, equipments and vehicles are generally in short supply at the unit armoury, the militia should be periodically given opportunities to train on Regular Force equipment throughout the training year.
4. Methods to attract and train specialists such as technicians for the service battalions, engineers and signals, should be examined closely. It is difficult to train men in peacetime in complex trades such as vehicle, radio, weapon and supply technician specialties. The use of civilian technical schools to conduct courses during the winter months for the technical trades may assist in reducing this problem in peacetime. Without trained combat support and combat service support tradesmen the militia's ability to support the Regular Force on mobilization is reduced. It is vital, therefore, that training of these personnel be kept in balance with that of combat units.

SECTION 3

CONDUCT OF TRAINING

GUIDELINES FOR OFFICER AND NCO TRAINING

1. Leadership and instructor training must be emphasized to ensure that a cadre of instructors exists to meet the influx of enrolees should mobilization occur. The leadership qualities for officers and NCOs have been discussed in Chapter 3. Getting time off from civilian jobs to attend career courses is the main obstacle in qualifying militia officers and NCOs in peacetime. Efforts must be made to decentralize much of this training to Land Force Area and district levels, and to conduct such courses in phases which will permit attendance. Home study must of necessity form a large part of the course packages. In addition, militia units should take every opportunity to send their qualified personnel on Regular Force courses.

2. Commanding officers are responsible for the training and upgrading of their officers and NCOs. Methods which can be used to assist this training include the following:

- a. Emphasize leadership and instructor training in the unit's training directives and reserve time for separate officer and NCO training.
- b. Establish leadership courses which consist of:
 - (1) techniques of instruction practice to permit students to gain confidence and to learn to think on their feet;
 - (2) discussions on tactics, organization and administration with the normal sequence being individual study and cloth model exercises, followed by TEWTs;
 - (3) the teaching of estimates and oral orders;
 - (4) instruction in voice procedure and use of operational codes; and
 - (5) the preparation of lesson plans and programmes of instruction.

3. The commanding officer must take a personal interest in leadership training as it prepares his officers and NCOs for attendance at formal qualification courses. As far as tactics are concerned, the commanding officer should personally conduct the TEWTs as it will provide valuable training for him as well as his unit officers. This type of instruction provides an excellent forum for the unit commander to establish unit SOPs and drills, and it gives him an excellent opportunity to assess his officers and NCOs.

4. TEWTs should be preceded by cloth model discussions with the first problem requiring indoor individual work that will ensure that the exercise is properly understood before going to the field. The problems should be practical and this can be done by referring to realistic situations and asking how they might be solved. This type of training is simple and economical and keeps unit officers and NCOs current on doctrine and tactics.

5. All training must be conducted pursuant to Regular Force doctrine if support is to be effective. Distribution of manuals to militia units must be carefully considered to ensure that this is achieved.

TRAINING WITH THE REGULAR FORCE

6. Integrated training between the Regular Force and militia should be encouraged. This is particularly true on field exercises and demonstrations since it gives militia personnel the opportunity to familiarize themselves with current tactical doctrine and equipments. In addition, leaders will have an opportunity to practise command and control, and the manoeuvring of their equipment under field conditions.

7. Such integration will build a strong relationship between the two components. Since Regular Force units have well qualified instructors and the operational equipment to instruct on, they are in a position to upgrade the militiaman not only in leadership and instructor training, but also in trades training. This is beneficial to the signals, engineers and service support units who might have difficulty finding sufficient instructors and equipment in their units to teach the whole range of complex trades.

SECTION 4

MOBILIZATION

GENERAL

1. Mobilization should proceed in an orderly fashion through three phases. In an army context, the first would be the augmentation of the Regular Force units to war establishment levels. This would be followed by a gradual expansion of the army, and finally a general mobilization in the context of a natural mobilization required by a protracted emergency.

FACTORS AFFECTING MOBILIZATION

2. **Time.** The major factor for consideration on mobilization is the time required to prepare and establish the mobilization base. If the term "training for war" is to be meaningful, our peacetime training system must be capable of converting quickly to a wartime posture.

3. **Doctrine.** A common tactical doctrine based on operational requirements is required in peacetime to permit both the Regular Force and the Militia to train towards common objectives.

4. **Training Areas.** Large training areas are required on mobilization and although these may not be required in peacetime, they must be readily available in the event of an emergency. Ranges will also be required on short notice for small arms and longer range weapons such as tanks, artillery, guided missiles and tactical air.

5. **The Militia Organization.** In WW II and Korea the militia played a major role and supplied the military backbone on which the wartime structure was established. In an emergency there may be a requirement to create balanced battle groups from the militia. Therefore, the peacetime organization should be structured and tasked as closely as possible to this requirement.

6. **Instructors.** When large numbers of individuals are being mobilized there is an urgent need for instructors. Since time is available for instructor training in peacetime, units should maintain the highest standard of instructional ability possible.

7. **Recruiting.** Experience has shown that the militia armoury became a focal point on mobilization, and recruiting was generally carried out from there. In peacetime, there should be a close relationship between the Regular Force and militia recruiting systems so that the two can be effectively integrated on mobilization.

TRAINING

8. Experience confirms that considerable time was lost during WW II and Korea during the conversion to wartime courses. Training standards should change from teaching multiple skills to that of selective operations, equipment or skill-oriented training. Only essential training material is required in the trade specifications and standards. Courses in peacetime can be longer and more thorough. However, training priorities must be established beforehand and mobilization course standards written and reviewed periodically in peacetime so that in an emergency they are readily available. Lesson plans supporting mobilization standards should also be written and retained by branch schools and militia units.

9. During the mobilization period, experience has shown that there is an urgent requirement for experienced officers and NCOs for training schools, HQ, logistic depots and recruiting centres. In past conflicts, many older officers and NCOs volunteered to rejoin their units. They took over senior appointments at the unit level but because of their age they eventually had to be replaced with younger leaders. In the future, young officers should be selected for unit appointments, and the older and more experienced officers posted to training schools and depots where their expertise can be used to the best advantage. The selection process for officers, NCOs and NCMs must be well established in peacetime, so that it is effective on mobilization.

FIELD TRAINING REQUIREMENTS

10. The most efficient method of training soldiers in an emergency is to train them under realistic field conditions. Training standards must reflect the fighting skills a soldier requires in war. These skills must be constantly refreshed at reinforcement depots and at formation battle schools to ensure that reinforcements are fully trained when they join their units.

STAFF COLLEGES

11. On mobilization there is a definite requirement for staff courses to train officers for both command and staff appointments. Since time is the critical factor, the peacetime course curricula from the staff colleges will have to be condensed. These abbreviated courses must be developed in peacetime to be immediately available for implementation when the mobilization plan is put into effect.

REGIONAL/FUNCTIONAL RESPONSIBILITIES

12. Experience demonstrates that to have effective functional control over the recruiting, equipping and training of soldiers, the military agency responsible should have operational control over the particular regions in Canada where militia and Regular Force units, bases and training areas are situated. The restoration of the Land Force Areas will allow this to occur.

SUMMARY

13. A mobilization plan must be realistic, simple and ready to be implemented on short notice. Commanders and staffs at all levels of command must be familiar with its concepts and priorities, and it should be exercised periodically in peacetime. The priorities of training for each trade and classification must be recorded and understood so that little time is lost during the critical initial stages of mobilization.

CHAPTER 6
EXERCISES WITHOUT TROOPS

SECTION 1
INTRODUCTION

GENERAL

1. This chapter and the related annexes discuss the preparation for and conduct of the following types of exercises without troops:

- a. indoor study periods;
- b. tactical exercises without troops (TEWTs);
- c. telephone exercises;
- d. command post exercises (CPXs); and
- e. war game assisted Ms.

SECTION 2

INDOOR STUDY PERIODS

AIM

1. Indoor study periods can be held at any level to teach, discuss or examine a series of topics or problems. Examples of tactical subjects for indoor periods on a model at battalion or equivalent level are:
 - a. teaching river crossing operations prior to a major exercise;
 - b. reviewing the theory of combined arms tactics during different phases of war;
 - c. studying the deployment and command and control of battalion anti-armour weapons; or
 - d. teaching crowd dispersal tactics in an internal security scenario.

MODELS

2. Models have the advantage of being able to show whatever ground is appropriate for the subject under discussion, and they can be rapidly altered for subsequent phases. However, they oversimplify matters and in tactical discussions concerning the use of ground, models are a poor substitute for the ground itself as they make no allowance for the "fog of war" or actual fields of view. They also tend to result in stereotyped solutions which seldom fit specific tactical situations.
3. A model should be simple. Every contour, building, stream and feature described on the model should have some purpose in furthering the aim of the exercise. The method of constructing cloth models is discussed at Appendix 1 to Annex A.

INITIAL PLANNING

4. The officer detailed to organize the indoor study period must first decide upon its aim, the lessons to be taught and the "ground" required. Initial instructions are then given for the construction of the model which is copied from ground shown on a map, photograph, sketch or blackboard.
5. A warning order should be issued. Assistants and directing staff (DS) should then be warned of the commitment and consulted on the content where appropriate.
6. At this early stage in the planning the officer in charge of the training must ensure that the study period will not be marred by the following:
 - a. insufficient time for detailed discussion;

- b. an inadequate number of alternative solutions which are essential to generate discussion. The model must suggest several acceptable but alternative courses of action;
- c. an attempt to illustrate too many lessons; or
- d. irrelevant, trivial or unrelated problems being discussed.

THE PROGRAMME

7. The programme and problems to be discussed should then be planned in detail. The problems should:

- a. follow a logical sequence;
- b. include considerable variety;
- c. create maximum interest; and
- d. ensure that everyone has an equal share of the work.

8. Assume that a battalion has been warned for a tour with the United Nations (UN) in Cyprus, and that the formation commander directs his staff to conduct a study period with the aim of preparing selected personnel for their new role. The instruction can be given in any number of combinations. Some examples are:

- a. **videos/films** showing Canadian Forces operating in Cyprus, old newsreels on the background of the problem or visual records of the UN operating in other countries;
- b. **talks** by a cross-section of ranks and appointments of personnel who have served in the UN, outlining the problems they faced and how they were solved;
- c. **playlets** showing a UN platoon commander negotiating a local ceasefire between different factions, the organization of the information cell or the manning of a section observation point (OP);
- d. **inspection** of a mock-up OP, including all the equipment required, and sample maps and sketches used in an actual OP;
- e. **lectures** by guest speakers on the administrative support required, or on previous UN operations in which the Canadian Forces have been engaged;
- f. **discussion** in syndicates on detailed and demanding tactical or administrative problems;

- g. **presentations** on a model by individuals, syndicates or the formation HQ staff, making maximum use throughout of mechanical aids such as tape recorders, viewgraphs, videos, slides and radio.

EXAMPLE PROBLEMS TO BE DISCUSSED

9. In the case of the brigade indoor study period on a battalion's forthcoming UN role, examples of tactical and administrative problems and methods of posing them are:

- a. **Tactical.** "You are the commander of three isolated section OPs overlooking an unused airstrip around which two hostile forces are dug in. (A tape recorder then gives radio reports from each section indicating a sudden, threatening tactical development, approaching aircraft, and the mass influx of hysterical refugees.) You receive radio orders from your company commander to reduce tension, keep the peace and calm the refugees! Just as the message is concluding, there is a crash, a cry, and then silence, leaving the commander to infer that a shell has wrecked company HQ. On the model give your estimate and plan to restore the situation. Marked maps, air photographs and other essential details are in syndicate rooms."
- b. **Administrative.** "Your decisive action succeeded in obtaining a partial withdrawal of the opposing forces, leaving you in control of the derelict airport buildings and 50 bitter refugee families who refuse to be moved, although they have no food and little clothing, and some are injured. (A brief presentation can then be staged to include a dazed refugee with a lurid and alarmist request for help or an injured UN soldier with a vague report of grave administrative problems.) You are informed that no vehicles can approach your positions due to extensive mining and only three CH147 lifts can be expected by you in the next 24 hours. Give your administrative plan."

ASSISTANCE REQUIRED BY THE STUDY PERIOD ORGANIZER

10. **The Director.** The exercise director will give the organizer the aim and scope of the exercise. At a formation study period the director will usually be the formation commander. He could introduce the study period, control the overall discussion and at the conclusion, summarize the lessons learned.

11. **Specialist Assistance.** The organizer will require the advice and assistance of those with specialist knowledge on the subject to be discussed. Sources of assistance need to be identified.

12. **Directing Staff.** They will be required to control syndicate discussion, feed in more information or re-orient the discussion to ensure that the appropriate lessons are learned. The DS should be officers of the highest available calibre, senior to those in the syndicate and represent each major arm participating in the exercise.

FURTHER PREPARATIONS

13. The organizer should also:
 - a. arrange for the appropriate mechanical training aids that are required;
 - b. finalize the scripts for all those participating; and
 - c. rehearse the presentations and run through the sequence of events.
14. The following administrative points require attention throughout:
 - a. lighting, ventilation, heating, seating, reception, transport and security; and
 - b. maps, air photographs, blackboards, chalk, damp dusters, pointers, paper, pencils, sketches, overlays and exercise staff data.
15. An information/clerical section may be required to answer queries, mark maps, update models or produce additional exercise papers.
16. Meals and breaks need careful planning to avoid frustrating lineups, congestion and confusion.

SYNDICATES AND EXERCISE APPOINTMENTS

17. Having received the final amendments to lists of participants, syndicate composition and exercise appointments should be finalized and issued.
18. Organizing the study period into syndicates simplifies the problems of handling large numbers and ensures that the maximum number of people are actively engaged in discussions.
19. Ideally, each syndicate should include a representative from each arm and have officers of varying experience. For example, at a formation study period discussing nuclear war, a syndicate could be formed to represent the officers in a battle group. The exercise appointments would include the commanders of the battle group, combat teams, the supporting battery, engineer field squadron, and officers responsible for nuclear, biological and chemical (NBC), reconnaissance, transport, resupply, signals and tactical air support.
20. Appointments need not necessarily be given to the appropriate officer. An infantry officer may learn more by having to study in depth the problems facing a forward observation officer (FOO) or helicopter pilot.

CONDUCT OF A STUDY PERIOD

21. The study period should commence with a brief summary of the exercise setting, general idea, Narrative 1 and Problem 1. This is normally given by the director or one of his staff. If appropriate, and if time permits, participants should be given a chance to observe the actual ground. This should be done by helicopter whenever possible.
22. At the appropriate time, DS listen to syndicate discussions to assess which of their solutions would be preferable to present. The DS guide discussion only if necessary to ensure the problem is adequately covered. Upon reassembling around the model, the director selects a syndicate to present its solution.
23. The syndicate does this on the model in a coherent and logical manner. Usually a brief estimate and outline plan are required. The major factors affecting the plan including ground, relative strength, time and space and courses open should all be covered. While having one speaker throughout enables the solution to be more consistent and comprehensive, it is preferable for each member of the syndicate to have an opportunity to speak, rather than have one informed officer dominate the proceedings. Therefore, the syndicate leader should try to give each major factor in the estimate or phase of the plan to a different speaker. The time for discussion will probably be inadequate unless the solution is presented in this way. The syndicate selected to present its solution should be discreetly forewarned just prior to the reassembly so that it can mark up any display maps, prepare drops and brief model movers, etc.
24. Once a particular solution is presented, the director can call upon other syndicates to present their solutions, then highlight differences in the solutions or merely comment on the various solutions. Controversial views will stimulate discussion.
25. After subsequent problems, presentations and discussions have taken place, the director should briefly sum up the exercise and highlight the more important points and the conclusions which can be drawn from them. Finally, he should emphasize the lessons learned. The study period can close with a handout summarizing a particular solution or points to be remembered.

EXAMPLE OF A COMBINED STUDY PERIOD/SIGNALS EXERCISE

26. **Initial Preparations.** After the necessary research, the officer in charge of the period selects a specific action based on an actual wartime operation. The example operation must be selected to ensure that the tactics used are relevant to current tactical doctrine, or if this is not the case, amenable to the modifications necessary to bring them into line with current equipments and tactics. He then writes the script, has a model constructed and plans the exercise. Several days before the exercise begins:
 - a. He rehearses the control staff.

- b. He issues the exercise papers to the participants. The papers should give the general idea, problem, maps or sketches and sufficient details which the participants will require to make an estimate and plan. They will do this on their own time prior to the indoor study period.

27. In this example, the organizer has selected an operation which involved a battalion of 1st Canadian Division in the invasion of Sicily on 10 July 1943 in which RCR, PPCLI and R22eR were involved. (The battles of these battalions are well documented.)

28. **Conducting the Exercise:**

- a. The study period starts around the model with a participant representing the commanding officer of the battalion facing a particular objective giving his estimate and plan. The organizer can call upon other attendees to criticize, highlight differences in their own plans or give their estimates.
- b. The organizer then gives the actual plan which was selected by the commanding officer in July 1943. To add realism, the orders can be given by tape recorder. Marked sketches are issued indicating objectives, routes and ORBATS. Participants also receive a full signals operating instruction but no hint is given as to how the battle will develop.
- c. Participants are then given a radio set and move to separate areas close by with the exercise papers, log sheets and sketches. They then set up their "mini" CPs and each is picked in turn to act as the battalion HQ operations duty officer.
- d. The control staff then re-live the actual battle as it developed. Using individual scripts, control represents the part played by the commanders of the landing craft, beached HQ, naval supporting craft, air support, and the battalion's sub-units. To add realism, control can fire blanks and use coloured smoke and thunderflashes to simulate enemy fire. Controls' voices should be elated, exhausted, breathless, inarticulate or whatever, to correspond with the activity being reported. Considerable imagination will have been required in writing the script.
- e. The participants are practiced in:
 - (1) making estimates and plans,
 - (2) voice procedure,
 - (3) absorbing the mass of detail which they receive,
 - (4) sending SITREPS and summaries, and
 - (5) seeking more information where and when necessary.

- f. Since the exercise is based upon an actual operation, it should be more realistic and exciting than an entirely theoretical exercise.

SECTION 3

TACTICAL EXERCISES WITHOUT TROOPS

AIM

1. The aim of TEWTs is to study tactics on the ground. They can be held at any level from a group of platoon commanders with their company commander, to a large scale exercise organized by a formation HQ.
2. A TEWT can be used to study past, present or future tactics and problems, including those with an administrative bearing. Examples of tactical subjects appropriate for discussion in battalion level TEWTs are:
 - a. the siting, layout and composition of a platoon and company defensive position; or
 - b. the grouping, deployment and movement of a leading combat team in an advance to contact.

GROUND

3. Factors affecting the choice of ground for the TEWT are:
 - a. The ground must be suitable to meet the aims of the TEWT.
 - b. The ground must provide sufficient variety for alternative solutions and viewpoints, be accessible, not be adversely affected by bad weather or have limitations on its use imposed by landowners.
 - c. There should be an alternative aim to which the TEWT's focus can be changed in the event that fog, cloud or mist obscures visibility.
 - d. The ground must provide good observation for all participants and DS.
 - e. Other factors include time, transport, car parks, circuits, hard standings, feeding and the availability of covered stands in the event of bad weather.

INITIAL PLANNING

4. The officer responsible for the TEWT must check with landowners that the ground may be used. He will then issue his warning order and work out the detailed programme by frequent visits to the ground and consultation with officers having specialist knowledge.
5. The following timings must be considered carefully to ensure that a TEWT can be conducted within the period allocated:

- a. movement between initial rendezvous (RV) car park to first viewpoint;
- b. the time required for marking and orientation of maps;
- c. time for consideration of problems, examining the ground and discussing the problems from different viewpoints. If possible, time for discussion of a problem should be almost double the time allotted for consideration;
- d. the time required for moving to subsequent stands; and
- e. time for feeding, closing address if any, returning to the car park and subsequent departure.

6. Having prepared a detailed timetable, and having arranged all outside support required such as air photographs, communications support, military police assistance (car parks, signing) etc, the writing of the exercise can be undertaken. The suggested form for a timetable is at Annex C.

EXERCISE PAPERS

7. As in the case of indoor study periods on tactical problems, students will require at least the General Idea, Opening Narrative and Problem 1. Annex B gives guidance for their content. The heading of the narratives and problems which are issued should indicate:

- a. "To be issued at Stand -- at ---- hours.
- b. "Problem to be discussed at Stand -- at -- hours."
- c. "Time for consideration -- minutes. Time for discussion -- minutes."

DIRECTING STAFF AND SYNDICATES

8. The selection of experienced DS is of much greater importance than the production of immaculate exercise papers. The role of DS, the requirement for forming syndicates and the exercise appointments are the same as for indoor study periods. See Section 2 paragraphs 12 and 17 to 20.

9. The DS will be required for the preliminary reconnaissance to discuss the problems and suggested solutions on the ground. They will expect the organizer, in consultation with the exercise director and experts, to have already worked out the detailed solutions. The DS should be briefed on the use of any specialist weapons or equipment with which they are unfamiliar. They should be given:

- a. detailed exercise papers, the problems and DS solutions; and

- b. mapboard notes giving a one page summary of the estimate and plan. (See Annex D.)
10. As in the case of study periods, syndicates should be kept as small as possible, and include a cross-section of officers of different arms to produce a more informed and balanced solution.
11. Within a syndicate, officers can conduct a reconnaissance on the ground and produce their plan individually, in pairs or as a group, each with a particular responsibility corresponding to their exercise appointment.

FINAL PREPARATION

12. The organizer should then issue the exercise papers amplifying details already sent in the warning order. For a major TEWT he should issue an index, timetable, syndicate and distribution lists, Special Ideas, Narratives and Problem 1. It should be noted, however, that unnecessary exercise papers are a burden on those who are asked to write them, and more important, on those who must read them.
13. Routes to the TEWT should be signed the day before, and white tape erected as necessary to mark car parks and stands.

CONDUCT OF THE TEWT

14. **Realism.** The DS is responsible for giving a realistic brief on the imaginary battlefield. The DS should indicate which areas are under enemy observation and fire. Students will then be expected to move and see the ground as in war, unless the director decides that movement on the TEWT should be non-tactical to save time or avoid damage to the crops.
15. Situations can be given verbally, by radio, or by pre-recorded tapes transmitted through loud speakers. Visual aids including flares, coloured smoke and thunderflashes can also be used to good effect.
16. **Conduct.** There are a number of alternative methods by which a TEWT can be conducted. One successful method is given below.
- a. Assume that the level of the TEWT is at the lieutenant to captain, combat team level, and that the principal phases of war to be discussed are the advance to contact and the attack. Prior to the TEWT students should be required to make a map study. Upon arrival at the first viewpoint, after a brief confirmatory study of the ground, they should be asked to indicate on the ground their order of march and the specific location of sub-units. Supplementary questions to be asked by the DS could include the composition and location of the combat team commander's O group and the radio communications available.

- b. At the conclusion of the discussion of Problem 1, the DS can give out, verbally or in writing, Narrative 2, which could indicate that the leading combat team is held up by an enemy platoon in a copse. The copse must be visible to everyone. (Thunderflashes and automatic blank fire from the copse or red smoke and a contact report over a loudspeaker from the notional combat team would add realism.) Students should then be asked to make an estimate and plan, and issue orders for an attack on the copse. Further questions can be posed as time permits. Examples are:
- (1) Give the commander's warning order.
 - (2) How would the plan be adjusted if a new factor had arisen, such as an unknown enemy minefield or a hitherto unlocated troop of enemy tanks?
- c. Problem 3, possibly after lunch, could cover administrative points such as the resupply of ammunition, radio batteries, water, the replacement of a tank barrel, the evacuation of wounded and method of feeding. If time permits, the final problem could include the re-organization on the objective, the patrol programme, the counterattack plan in the new position and the types of minefields and artillery support available.
- d. The problems should follow each other logically, providing tactical continuity and realism. They must be discussed in relation to the ground that can be seen.

17. After students' answers to a problem are discussed, the DS usually imposes a suggested solution which forms the basis for the next problem. Alternatively, an individual or syndicate solution could be used for the subsequent problems. This sometimes works well, as more interest is taken in following up students' own solutions. However, since common lessons must be learned by the different syndicates, pre-designated viewpoints are desirable and improvised discussions tend to diverge from the aim of the TEWT, a single DS solution for each problem is normally the best approach.

18. **Director's Summary.** The director should listen to students' solutions so that he can better summarize the lessons learned and the major errors.

SECTION 4

INDOOR TELEPHONE EXERCISES AND COMMAND POST EXERCISES

GENERAL

1. Just as TEWTs and indoor study periods have much in common, CPXs and indoor telephone exercises involve similar preparations and their battles develop along similar lines. The essential difference between CPXs and indoor exercises are:
 - a. CPXs usually involve brigade, battalion and several company/squadron skeleton HQs deploying with HQ of other arms, and subsequently moving to new locations. Indoor telephone exercises take place in a number of rooms and involve less sophisticated communications.
 - b. CPXs have greater tactical realism than indoor telephone exercises because the players may be required to move, harbour, feed, resupply and camouflage tactically. HQ in CPXs can also be realistically practiced in siting and working in unfavourable conditions such as on the move, during a chemical attack or at night with light and noise discipline imposed.
2. Both CPXs and indoor battles involve staffs being exercised by a nucleus of another group which has set the exercise. For example, a small CPX on battalion operations could consist of a control staff of four who exercise the remainder of battalion HQ.

AIMS

3. Both types of exercises can be used to practise staffs in any or all of the following:
 - a. organization of duties in different phases of war;
 - b. operational staff work;
 - c. air/land staff work;
 - d. preparation of estimates, orders and instructions;
 - e. communications; or
 - f. nuclear staff work.
4. **Operational Staff Work.** Exercises can practice the players in any of the following:
 - a. developing a sense of priorities when conflicting reports, requests or problems arise;

- b. establishing a system of relief and an efficient duty officer system;
- c. using standing orders, logs, battle message boards, orders of battle, location states, office aids, and reports and returns;
- d. preparing maps which may be required to show current operations, intelligence, artillery defensive fire plans, patrol programmes, minefields, etc;
- e. compiling, receiving and disseminating situation and reconnaissance reports to/from higher/lower/flanking formations and HQs;
- f. processing shelling, mortaring, bombing and chemical reports;
- g. patrolling staff duties;
- h. minefields and demolitions reporting and control;
- j. the full intelligence process;
- k. air photograph interpretation; and/or
- m. handling captured documents and equipment.

5. **Air/Land Staff Work** to include:

- a. planning offensive air support, counter air and interdiction, air reconnaissance and air transport support; and
- b. handling messages on air requests, air tasking, time on target, forward line own troops, in-flight reports, mission reports, and requests for air photos, etc.

6. **Preparation of Estimates, Orders and Instructions.** Staffs can be practiced in the accuracy, brevity, speed and clarity with which they prepare estimates and pass orders. Particularly relevant are:

- a. warning orders;
- b. issuing formal orders, or verbal orders by radio;
- c. telephone or radio relay, or through a staff or liaison officer; and
- d. movement orders.

7. **Communications.** Staffs can be practiced particularly on CPXs in:

- a. voice procedure;

- b. manning of sets;
 - c. use of codes and cipher material and equipment;
 - d. monitoring line and radio; and
 - e. anti-jamming procedures.
8. **Nuclear Staff Work.** Target analysis, nuclear fire planning and the NBC reporting organization can all be practiced on CPXs and telephone exercises.
9. Suggested states and reports and returns for use in telephone exercises and CPXs are at Annex E.

PARTICIPANTS

10. The following personnel are involved in CPXs and indoor exercises:
- a. an exercise director;
 - b. an exercise organizer or chief controller;
 - c. the control staff;
 - d. those being exercised - the players; and
 - e. observers and umpires.
11. **The director** will give the organizer the aim and scope of the exercise. He will supervise the exercise and adapt it as necessary as the battle develops. In the case of a brigade exercise, the director will usually be the brigade commander.
12. **The exercise organizer**, assisted as necessary, will be responsible for the detailed planning and writing of the exercise, the issuing of the exercise papers and acting as the chief controller of the exercise itself.
13. **Control Staff.** The control staff exercises the players by:
- a. feeding them information employing a combination of verbal and written messages, radio, telephone calls, visitors, tapes, prisoners of war, deserters, stragglers, captured documents or liaison officers;
 - b. reacting realistically to information, reports, returns, orders and messages received from the players; and

- c. developing the battle to cover new phases, lessons and topics.
14. The control staff can represent higher, lower and flanking formations as follows:
- a. **A higher control** can represent brigade HQ, outputs from an automatic data processing (ADP) command and control system, drones and radars, regiments of artillery, engineers, rear administrative units, flanking battle groups, forward screen troops and tactical air support. Higher control would also represent flanking formations.
 - b. **A lower control** can represent combat teams, reserve demolition commanders, reconnaissance troops or platoons, forward air controllers, battery commanders, forward observation officers, patrol commanders, liaison officers, engineer troop commanders, civilians, or refugees. Guidance for lower controllers in skeleton exercises is at Annex F.
15. **Delay Control.** The function of delay control is to add realism to the exercise by imposing real delay when it would be caused, for example, by messages being processed, a commander moving to a new location or the carrying out of a reconnaissance. The delay control cell holds up signals, jams communications and generally delays proceedings to simulate the time lag of actual operations.
16. **Controller's Responsibilities.** Control staff can expect to work as hard as, if not harder, than the players. To this extent they are also being exercised. At all times, they will have to be aware of the most up to date situation, respond realistically to the players' activities and be one step ahead in planning subsequent developments in the battle.
17. **Controllers' Methods of Operating.** There are two principal methods:
- a. Control feeds in serials flexibly as the battle develops in keeping with the broad direction given to them by the director and organizer. This involves minimal paper work but very careful briefing of controllers.
 - b. Control has individual written briefs and sends precise messages in the following format:

Ser	Time Message to be passed	Time of event	Phase	To be Completed Rem				
				Event	Details	Passed to	at Timed Con	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
12	1010	0955	Advance to Contact	Two enemy tanks Seen GR 1234	T-62 Stationary Hull down	Bde HQ	1011	Tol Obs

18. **The Players.** Players will be expected to receive information, staff it as necessary and take subsequent, appropriate action. The players should include officers of different arms to represent for example, at battalion level, the armour, artillery and engineer commanders who would be available to a battle group commander in war. The maps which can be used by players in both indoor exercises and CPXs are shown at Annex G.

19. **Observers and Umpires:**

- a. They monitor the exercise, remaining in contact with the players and controllers. Their task is to assist the director and chief controller by advising whether the exercise should be adjusted, and noting lessons learned and points for summing up. They should avoid interfering in the players activities or tactlessly be seen to be checking on individuals' abilities. They can also assist the delay control staff.
- b. If there is an enemy involvement, such as the introduction of a wounded PW with a concealed marked map, the umpire/observer can assess whether the players have taken the correct action.

POINTS FOR CONSIDERATION

20. The following points should be considered when planning CPXs or indoor telephone exercises.

21. **Tempo.** The exercise must build up very gradually. The tempo should only be raised when the staff are reasonably familiar with the exercise setting, have had time to work together and are familiar with the exercise staff procedures and communications. An exercise halt can be called should confusion become too great, communications fail or to ensure that lessons are highlighted immediately. Nevertheless, war is far worse, and more momentous muddles occur than can be represented in peacetime. Therefore, the exercise should aim ultimately to bring very considerable pressure on the commanders and their staffs.

22. **Timings.** It is acceptable for exercise time to be different from real time, or for it to be telescoped to overcome inactive periods. In any event, all participants must be aware of any time changes. Furthermore, all must be updated on any relevant changes to the situation if the exercise time has been changed.

23. **Realism.** If the control staff introduces unrealistic factors or information, it can expect to receive challenges from the players, and the exercise will lose credibility and value. The players should be made to work in the conditions which they can expect in war.

EXERCISE PAPERS

24. Most CPXs and indoor exercises require the issue of:

- a. initial instructions and exercise warning order;
- b. an index, general instructions, special instructions, general or special idea, narratives, full communications electronics operating instructions (CEOI), lists of those participating and distribution lists. The CEOI should include, as necessary, frequencies, call signs, nicknames, numbers for radio relay, radio nets and distributions, switchboard designators, telephone directory, codes and security instructions, etc; and
- c. a general outline of the exercise and outline of events for control staff, observers and umpires.

25. Since paper work must be kept to the minimum, as much information as possible should be shown on marked maps and overlays. Papers should be issued on a very strict need to know basis, with the exercise classification, such as "control eyes only", indicated. These papers should be printed on a distinctive, coloured paper, traditionally pink.

26. A sufficiently detailed picture must be painted to ensure that all participants start with the information which they could expect to have in war. Detail on the enemy however, will obviously be limited and possibly deliberately inaccurate. Certain branches of staff may require separate briefs. See Annex H.

EXAMPLE OF A BATTALION HEADQUARTERS CPX

27. Initial preparations to be undertaken at least several days, if not weeks, prior to the exercise include:

- a. A practice deployment or test exercise, if the players have not worked together recently. They should practice deploying the battalion HQ, test communications, check that they have the correct stationery, vehicles, trailers and equipment, and that everyone is briefed on their role and duties.
- b. The organizer must ensure that the exercise will conform to realistic battle developments. Having reconnoitred the ground and planned the exercise, and assuming a scenario where the controller has three assistants, he will brief and rehearse them. Their roles could be:
 - (1) **a higher control assistant** to represent brigade HQ, other battle groups, armoured, artillery, engineer units, liaison officers and the commander of screen troops on the brigade net;
 - (2) **a lower control assistant** to represent all units which would be under command of, or be in contact with, the battalion, including several reserve demolition commanders and administrative units, principally on the battalion net; and
 - (3) **a third assistant** to command specially briefed individuals playing the part of some of the following: a refugee; deserter; saboteur; PW; VIP; straggler; or liaison officer who can be fed in appropriately dressed to add realism, humour and variety. Similarly, he will control captured maps, documents or equipment which also could be introduced.
- c. The organizer issues the exercise papers which will include:
 - (1) the opening narrative to show that the battalion is in defence and gives details on known enemy forces (intentions, troops, air), friendly forces (locations, troops, defences, mines, wire, guns, reserves, obstacles), and deployment; and
 - (2) the CEOI to detail frequencies, call signs, codes, address groups and collective calls.
- d. general instructions to state that battalion HQ is to be camouflaged at a specific grid reference at a certain time and when they will receive their first transmissions.

28. **Conducting the Exercise:**

- a. The organizer and the assistants establish their Control HQ close to, but out of sight of, battalion HQ. At the appointed hour they will establish communications and transmit information to battalion HQ. Battalion HQ will include the complete complement of personnel and equipment which it would have in war.
- b. Control feeds in initial reports from air reconnaissance, the brigade intelligence cell, forward patrols and refugees; all indicating a particular enemy approach, order of battle and tactics. Gradually the battle will develop. Battalion HQ will be required:
 - (1) to send situation reports (SITREPS), patrol reports, armoured fighting vehicle (AFV) states, air support requests and casualty returns; and
 - (2) after the necessary estimates, to make operational decisions on the redeployment of the notional sub-units, and to issue orders by radio to meet the threat.
- c. Control can then build up a picture of a sudden enemy thrust to a vital reserve demolition, order the battalion's withdrawal to conform to flanking formations, or order an airmobile operation to secure a particular objective. Battalion HQ would be required to:
 - (1) order the blowing of the reserve demolition if their orders permit;
 - (2) issue new orders for the withdrawal; and
 - (3) actually move tactically to their new position, continuing to control the battle on the move or by stepping-up.
- d. Variations on this fairly simple and straightforward exercise can be:
 - (1) control forcing battalion HQ to move on foot divorced from its vehicles;
 - (2) control changing the exercise time to represent the activities of 24 hours; or
 - (3) introducing administrative and logistical problems. In this case, control will require more assistants.
- e. **The Roles of the Director and Organizer:**
 - (1) **The director** will observe the functioning of battalion HQ, control the tempo of the battle and decide what improvements can be made to procedures for subsequent exercises.

- (2) **The organizer** at Control HQ can sit between the two assistants who represent higher and lower control. He will assess the accuracy, speed and clarity of the players' reports. He will also plan the development of the battle in the light of the players' orders and instruct his assistants as to the picture they are to paint. When players make significant errors, the organizer can interrupt the exercise to draw their attention immediately to the mistakes, thereby ensuring that improvements are introduced as the exercise progresses. Should the exercise be a long one, reliefs will be required.

SECTION 5

WAR GAME ASSISTED COMMAND POST EXERCISES

INTRODUCTION

1. The War Game Assisted CPX is an excellent training vehicle for all levels of command within a formation. It is a two-sided radio/telephone battle, in a brigade group scenario, with war gaming techniques employed by the controllers.

AIM

2. The War Game Assisted CPX is designed to reproduce, as nearly as possible, battle interactions and outcomes in which the initiative of commanders and efficiency of staffs are practiced against an opponent. The aim may be to:

- a. practise a commander in the art of command against an opposing commander;
- b. practise commanders and their staffs in framing and executing plans;
- c. exercise staff officers in their duties in HQ; or
- d. study specific phases of war or specific aspects of a forthcoming operation.

SCOPE AND DURATION

3. This kind of exercise can be developed for any type of mechanized or dismounted operation by day or night, in any phase of war; for example attack, covering force, assault river crossing, defence, counter-attack, etc. It is conducted in real time and, provided the necessary staffs are available, can be conducted continuously for an indefinite period with brigade and unit command posts (CPs) deployed.

TRAINING VALUE

4. The brigade level War Game Assisted CPX provides excellent training value in that:
 - a. It exercises unit CPs and the brigade CP in virtually all operational aspects such as estimates and plans, orders, intelligence, fire support co-ordination, staff duties, radio procedures, standing operating procedures (SOPs), etc.
 - b. It exercises administrative and logistics support procedures, particularly as they relate to handling and replacement of personnel and vehicle casualties, replenishment of major natures of ammunition, delivery of mines, etc.

- c. It provides good training for the lower controllers in the application of unit SOPs, tactics and fire support at company/squadron level, as they represent the various sub-units and individual detachments. They see the development of the battle, the detailed interactions and the impact of orders or responses.
- d. It is an excellent training vehicle for the exercise director, who is normally the commander of the unit or formation being exercised. He will be able to see the force interactions, test SOPs and plans, and trace the passage of information and orders through unit and brigade CPs for consistency, interpretation, reaction, completeness, timeliness, etc.

ADVANTAGES

- 5. The War Game Assisted CPX, in addition to having the advantages inherent in all two-sided exercises, has the added advantage that it is dynamic, with no directing staff notes or pre-planned solutions. The interactions between elements of opposing forces stem directly from the decisions and orders of the various CPs, and the results of those interactions are determined by well-tested war game rules and assessment procedures and are based on the conditions that prevail at the time. The realistic outcome of the interactions are the inputs to unit CPs for subsequent decisions and orders.
- 6. Operational and logistical aspects, such as those noted in paragraph 4b, can be exercised or tested and lessons brought out.
- 7. By selecting the terrain, enemy, and friendly orders of battle (ORBATs) and equipments, a commander can exercise his staffs and CPs in environments and situations not normally experienced in Canadian training areas, or with current organizations and equipments. Indeed, a Commander can tailor his exercise in any number of ways, restricted only by availability of proper scale maps, personnel and knowledge of equipment capabilities for production of assessment procedures and rules.
- 8. With minimal assistance from the Directorate of Land Operational Research (DLOR), War Game Assisted CPXs can be conducted within the resources of brigades.

DISADVANTAGES

- 9. As with all valuable training exercises, the War Game Assisted CPX requires considerable preparation. Additionally:
 - a. Depending upon the exercise objectives, scope and duration of continuous operations, it requires a large number of exercise personnel and control staff.

- b. Operation of the control room depends upon the War Game Section of DLOR, reinforced by the formation being exercised. The former, because of the detailed knowledge of rules and assessment procedures required by the controllers and chief assessors, and the latter to supplement the assessment staff for 24 hour operation as well as provide the unit lower controllers.

PREPARATION

10. **Objectives and Scope.** The Exercise Director, who is normally the commander of the formation being exercised, sets out the objectives which are stated in terms of teaching, testing or practising key personnel in various types of operations in a specified phase of war. He also sets out the exercise scope, to include the particular aspects which will be emphasized, such as SOPs, field staff work, fire planning, radio procedures and so on. Once the objectives and scope have been determined, detailed planning can commence including arranging for the necessary personnel and materiel resources, and preparation of exercise papers.

11. **Assistance From Outside the Formation.** Because of the specialized expertise involved in the methodology and the rules and assessment procedures associated with the control function, assistance by the DLOR War Game Section is required during the planning and conduct of the exercise. It may also be advantageous to seek additional outside assistance for specific higher control positions such as artillery, air and intelligence, and to act as enemy operations staff and enemy lower controllers. In this way the formation can exercise the maximum number of its own personnel.

12. **ORBAT, Organization and Equipments.** These must be stated for both friendly and enemy forces, including any assumptions with respect to equipments and weapons to be used and non-organic support assigned or available.

13. **Maps and War Game Control Map Identifiers.** For the exercise area, standard operational map coverage, eg, 1: 50 000 scale, is required for brigade and unit CPs, lower controllers and higher control. The control maps on a scale of 1: 12 500 or 1: 10 000 are required to cover the complete exercise area in which opposing forces will be in contact. Arrangements for these are made by submitting a request to DCARTO. DLOR will provide the War Game Control Map Identifiers as discussed in paragraph 22, prepared in accordance with the exercise ORBATs and organizations.

14. **Physical Layout (Facilities).** Separate accommodation is required for the commanders and staffs of both sides, the unit staffs of the formation being exercised and the control room. The following should be considered:

- a. For the formation being exercised, the brigade and the unit CPs should be deployed in their CP vehicles. If this is not possible, separate indoor accommodation must be provided, set up to simulate each CP.

- b. The enemy force commander and staff, including operations, intelligence, artillery, engineers and air, require indoor accommodation suitable for planning and directing enemy operations.
- c. The control room accommodation requirements are set out in paragraph 21.

15. **Communications:**

- a. Preferably, radio will be the means of communication between lower controllers and units, units and brigade HQ, and brigade HQ and higher control. If field telephones are used in lieu, they should be so connected that radio nets are simulated.
- b. The communications diagram must be included in the General Instructions. CEOs also must be issued giving address groups, codes, call signs, frequencies, etc.

16. **Narratives:**

- a. **General Ideal.** This provides a logical setting and contains information that both sides should know.
- b. **Special Idea.** This gives information that would be known only to the side concerned. It gives the ORBAT and disposition of the higher formation of which the organization being exercised is a part. It is a combination of the latest situation reports, intelligence summaries and operation orders from the immediately superior HQ. It must be sufficiently complete for the commander of the respective side to make his plan and issue his orders.

17. **Estimates, Operations Orders and Deployments.** From the respective Special Ideas, the commanders on each side complete their estimates and plans. Subsequently, all deployments down to platoon/troop and individual major weapons, minefields, obstacles, etc, are plotted on the control map.

18. **Security:**

- a. Normal communications security must be applied.
- b. All exercise narratives, estimates, orders and written work must be handled with the appropriate degree of real and exercise security.

19. **SOPs, States, Reports, Returns.** Each of these must be clearly identified and sufficient quantities available prior to and during the exercise.

CONDUCT

20. Prior to commencement of the exercise:
 - a. All participants are briefed on the objectives, scope and the way in which war game techniques fit into the exercise.
 - b. Brigade and unit CPs are deployed, or set up in building accommodation, and manned.
 - c. Lower controllers are briefed by their units or unit deployments, plans, concepts, SOPs, etc, and by the War Game Section Controller on control room operations and lower controller duties and responsibilities.
 - d. All deployments down to platoon/troop level and selected individual equipments such as heavy anti-armour weapons, air defence weapons and helicopters, are laid out on the control map.

21. **Layout.** A schematic of a typical layout, and communications between the control function and the exercised formations and units, are at Annex J.
 - a. The control room must be sufficiently large to accommodate:
 - (1) map coverage, on a large scale (normally 1:10 000 or 1:12 500) mounted on 4 ft by 8 ft (1.2m by 2.4m) sheets of plywood with a clear plastic sheet to cover the entire exercise area of operations;
 - (2) higher Control division, flanking formations and air staffs;
 - (3) controllers and assessors (up to nine persons); and
 - (4) two lower controllers for each exercised unit plus FOOs, plus one lower controller and one FOO for each enemy regiment.
 - b. Within the control room, all communications are verbal, non-electronic.
 - c. Each exercised unit and formation HQ will be established either in its own CP vehicles or inside separate accommodation. All communications links will be by radio or field telephone.

22. **War Game Control Map Identifiers.** A brigade level War Game Assisted CPX may require up to 1200 separately identified sub-units, equipments, demolitions, etc. Colour coded pins, flags and other markers as set out in Annex K are used to cover the following: HQ, platoons, tank troops, anti-armour weapons, air defence weapons, close support aircraft, helicopters, artillery high explosive (HE) fire, smoke, illumination, minefields, demolitions, vehicle casualties, sub-unit or individual equipment status including moving or deployed echelon vehicles, etc. These identifiers, moved by the controller on the control map in response to the directions and orders from units and in accordance with the rules, are used by the controller and assessors in determining interactions.

23. **The Control Function.** The operation of the control function, including the part that war game techniques play in the exercise, is described in the succeeding ten paragraphs, which should be read in conjunction with Annex J.

24. The War Game Group, comprising controllers and assessors, is co-located with the lower and higher controllers to provide a complete control organization. Although no troops will be deployed, all orders, deployments, movements, etc will be acted upon, in detail, in the war game.

25. Decisions and orders will be made as for any normal exercise. For example, brigade HQ will pass orders by radio to its units. Units will pass their orders to their sub-units, that is, their lower controllers. Each lower controller represents all out-stations on the unit net. For example, an infantry battalion lower controller represents all the rifle companies, support platoons, weapons detachments and reconnaissance patrols of that battalion. The lower controllers must be completely familiar with unit SOPs, ensure that their unit activities are portrayed accurately, and that their unit interests are looked after. The lower controller will interpret the orders as a company or squadron commander, or whatever, but instead of sub-units moving and umpires evaluating, he will pass his actions verbally to a game controller who will plot them on the control map.

26. As the game controller plots the sub-unit actions as briefed by the lower controller, he identifies the interactions for assessment, including intervisibility, range, suppressive fire and so on. The appropriate assessor determines the result in accordance with war game rules and procedures and tells the lower controller, for example:

"B Company just suffered three personnel casualties from fighter ground attack by two aircraft;" or,

"2 Troop was fired on by anti-armour weapons from area GR 982 310. No casualties;" or,

"3 Troop engaged T62s at GR 123 456. Two kills. One Leopard killed by return fire;".

27. The lower controller then reports this information as a SITREP or Contact Report to his unit CP, which reacts accordingly.

28. The lower controller, as well as looking after the interests of his unit, must exercise his unit CP in a realistic fashion by describing activities he is entitled by assessment to describe, imposing delays when such are assessed, etc. The lower controllers must be neutral. Giving CPs information to which they are not entitled reduces the effectiveness of the exercise.

29. Since a unit CP will be operating with only battle intelligence from its lower controller, other units and brigade HQ, it will never know, in precise detail, the enemy deployments and locations. This of course, adds realism to the interactions and their outcomes. Probabilities determine whether detections will be made and whether hits will be achieved by anti-armour weapons, tanks and artillery so that throughout the exercise, just as in real life, nothing can be taken for granted. The course of events will be decided by the interactions and by how the participants at all levels handle their successes or setbacks.

30. With respect to artillery:

- a. Normal affiliations take place, with the commanding officer at brigade HQ and battery commanders at battalion HQ, doing their normal jobs.
- b. A FOO will be situated with the lower controller of each unit that normally would be allotted a FOO. He, in conjunction with the appropriate lower controller, will call for fire, do fire planning and carry out his normal artillery functions. Thus, he will be able to engage targets of opportunity or adjust fire for fire plans, but always working in conjunction with the control staff. His shots will be evaluated by the artillery assessor and the results made known to him for appropriate action. Counter bombardment also may be played.

31. Offensive air support activities are simulated in the same detail as ground force operations:

- a. Requests for close air support or reconnaissance sorties originating within the brigade will be passed by the tactical air control party to the liaison officer at division (higher control).
- b. Division will pass them onward to theatre air, played by the air assessor.
- c. If approved in accordance with the rules, aircraft numbers and types of weapons will be assigned and passed back to the higher air controller who will simulate mission planning and execution.
- d. The air assessor will then assess the mission and pass the results to the higher air controller for onward transmission to brigade HQ. At the same time, lower controllers will get any results that affect their units, including overflights and observed damage.

32. Light observation helicopters assigned to a unit will be played by that unit's lower controller. For example, the reconnaissance squadron lower controller, in accordance with the reconnaissance squadron commander's orders, will simulate through the controller and assessor all missions for helicopters in direct support of the reconnaissance squadron. The lower controller of the helicopter squadron will monitor these activities and pass appropriate information back to his own headquarters.

33. All other helicopter requests, such as transport and armed helicopter missions, will originate at brigade HQ and pass from the tactical air control party directly to the helicopter squadron. The squadron will plan the mission and pass the plans to its lower controller who will simulate the mission through the controller and helicopter assessor. Mission results will then be passed back to the squadron and to any other unit involved.

34. **Rules and Assessment Procedures.** The methodology, rules and assessment procedures accommodate interaction of forces at all levels within the brigade and its non-organic assigned support versus enemy forces, such as a tank division or motor rifle division or variations thereof, plus some elements (principally artillery, helicopters, and fixed wing air) which could be assigned from higher formation resources. They cover in considerable detail all aspects of: detections, direct fire from tank guns, machine guns, anti-tank guided weapons (ATGWs), indirect fire including HE, illumination and smoke, obstacle preparation and reduction, minefield laying and breaching, bridging, ferrying and rafting, tactical movement and deployment, observation, armed and transport helicopter operations, fixed wing aircraft operations including fighter ground attack, reconnaissance, and air defence.

35. **Action by the Exercise Director.** The Exercise Director can influence the exercise by either modifying the enemy plan according to the action taken by the HQ being exercised or by issuing orders through higher control. By the latter means he can keep the major aspects of the battle under control so that the situations he wishes to create do, in fact, happen.

36. **Exercise Summary.** At the end of the exercise, all participants being exercised should be invited to the Control Room for an examination of the final positions of all sub-units and detachments. Additionally, the Exercise Director should hold an exercise summary on the conduct of the exercise and review the lessons which emerged from it related to the exercise objectives.

REAL ADMINISTRATION

37. Any administrative point which is not part of the exercise, and will not directly influence its course, should be included in General Instructions. Headings should cover such subjects as: rations and quarters, transportation, reception, dress, financial responsibility, exercise accommodation, maps, office supplies, barrack stores, medical, daily administration, and important telephone numbers.

SUMMARY

38. In the past the training of land forces relied to a large extent on the combat experience of officers and NCOs to simulate realistic activity. However, it is now more than three decades since the Canadian Army last fought. In concert with the dwindling numbers of battle-experienced commanders and trainers, there has also been a substantial reduction in field exercises, both in quantity and scope. The War Game Assisted CPX can measurably redress this situation.

39. The War Game Assisted CPX is designed to reproduce, as nearly as possible, a simulation of battle interactions and outcomes. The interactions between elements of opposing forces, at all levels in the brigade down to individual weapons, stem directly from the decisions and orders of the various CPs. The results of these interactions are realistically determined by the prevailing conditions using well tested rules and techniques developed from operational research, technical trials, user trials and field exercises, and are continuously evolving to incorporate new weapons, equipment and data. The course of events will be decided on by the interactions and how the participants at all levels handle their successes or setbacks.

40. The War Game Assisted CPX can be used to train or test commands and staffs at all levels within the brigade group in mechanized or dismounted actions in all phases of war. It is ideally suited for testing or practising SOPs, plans, orders, fire support co-ordination, tactics, intelligence flow, radio procedures, staff duties, and administrative and logistic support procedures.

CHAPTER 7

EXERCISES WITH TROOPS

SECTION 1

TYPES OF FIELD EXERCISES

"One sound principle is to be always stronger than your enemy."

INTRODUCTION

1. This chapter discusses the preparation and conduct of exercises with troops.
2. **Types of Exercises With Troops.** Exercises with troops are categorized as follows:
 - a. battle procedure and battlecraft;
 - b. field firing exercises;
 - c. HQ training for staffs and signals units;
 - d. field training exercises (FTXs) (one and two sided); and
 - e. administrative exercises.

The above exercises may range from being relatively minor, in which only a few men are engaged, to large scale events designed to train commanders and their staffs, and formations.

3. **Battle Procedure.** Once the mechanics of deployment have been taught on a model, they can be applied in an exercise on the ground. The drills for deployment, harbouring, occupation of positions, movement of vehicles and HQs, and cooperation between all arms must be practised continuously if a unit or formation is to reach and maintain operational standards. In all types of war time is at a premium and it must be the constant aim of commanders to train their formations and units to arrive at the right place, at the right time and in the right order. If the mechanics of battle procedure have been thoroughly mastered by every soldier, the inherent confusion of the modern battlefield will be largely overcome.

4. **Battlecraft.** The routine tactical manoeuvres of combined operations must be practised until they become instinctive. This will ensure that sub-units in close contact with the enemy can cooperate and be easily controlled. The principles of training in minor tactics, fieldcraft, camouflage and concealment are all aspects of battlecraft.

5. When troops, for example, are first practised in the attack, commanders must not attempt to teach too much. At the beginning, each phase should be practised separately. The first exercise might consist of a move from a harbour to an area from which an assault is made. The second might progress to the point where the enemy position is overrun or by-passed. The third might involve reorganization or exploitation. This step-by-step approach will simplify even the most complicated manoeuvres and reduce a great deal of activity to well-known procedures and drills.

6. **Field Firing Exercises.** A field firing exercise with live ammunition may range from a section attack over a few hundred metres to a battle group exercise. It can be the most rewarding of all exercises and is particularly valuable as a means of training troops to advance under cover of their own small arms fire, mortars and artillery. It is also a teaching medium to practise cooperation between arms. The fact that safety restrictions are imposed must be accepted, but even under these restraints tremendous training value is gained. Troops must not be exercised in field firing until the standard of individual weapon training is high enough to enable them to obtain practical value from the training without jeopardizing their own safety or that of others. Strict attention must always be paid to fire control and safety precautions. Troops must be fully briefed prior to the exercise regarding restrictions on their fire and movement, and sufficient safety officers and NCOs must be available to impose control immediately should safety precautions be forgotten through over-enthusiasm or error.

7. **Headquarters Training for Staffs and Signals Units.** The aim of this type of training is to practise HQ in their internal organization, drills and procedures. It is only after these skills become well-known and automatic that a HQ can effectively execute its primary function of command and control. Training of this nature can be conducted concurrently with a CPX. The following are some important aspects of this training:

- a. the composition of reconnaissance parties to select the location of the HQ, either in the open or under cover;
- b. the layout of a HQ in open country or in a built-up area;
- c. the move of a HQ by day and night, including step-up procedures;
- d. the defence of a HQ on the move and when static;
- e. the establishment of communications and deployment of radio rebroadcasts (RRBs);
- f. the production of operations and administrative orders and instructions;
- g. holding conferences and staging orders groups;
- h. the assumption of alternative command;
- j. the redistribution of duties in the case of casualties; and

- k. interior operation of HQ covering such points as reliefs, feeding arrangements, rest areas, handling visitors, signing, etc.

8. **Field Training Exercises (One-sided).** The aims of a unit one-sided FTX are to ensure that a formation or unit is efficient in a particular method of deployment and tactical action, and that commanders and staffs effectively handle troops. A one-sided FTX usually includes a small, controlled enemy. The commander being exercised is given as free a hand as possible within the general framework of the exercise but the director, by controlling the action of the enemy, can lead the exercise along the lines which will accomplish his overall aims.

9. The enemy is controlled by a staff which acts as the enemy's higher HQ. Previous reconnaissance by enemy commanders and by the umpires working with both sides is always necessary. A commander should not try to combine the functions of commander and director, as he realistically cannot do both tasks.

10. **Field Training Exercises (Two-sided).** This type of FTX provides commanders, staffs and troops with practical experience in a phase of war under conditions resembling, as nearly as possible, those of the battlefield. The introduction of laser-based tactical engagement simulators will greatly enhance the value of these exercises. It also permits higher commanders to assess the standard of training of formations and units. These aims cannot be achieved unless the exercise is allowed to proceed, within reason, according to the merits of the opposing plans and the skill with which they are executed. Encounters between the opposing forces must be judged, even with the use of tactical engagement simulators, by capable, well-trained umpires. When these conditions are fulfilled, initiative, speed and cunning enjoy their legitimate rewards. This type of exercise can vary from a simple sub-unit exercise to full scale manoeuvres.

11. In practice, a director is seldom able to permit an FTX to develop without taking some action to control it, particularly when training areas are restricted. The director can retain control by:

- a. issuing orders and instructions as a higher commander;
- b. issuing information about operations on the flanks and elsewhere;
- c. issuing intelligence;
- d. introducing nuclear and chemical strikes; or
- e. introducing real reinforcements to either side.

12. **Command Field Exercises (CFX).** This type of exercise combines elements of both the CPX and FTX. In practice, one part of the force is deployed on an FTX while other elements participate in the same scenario with a CPX. For instance, within a brigade, a battle group may be deployed on the ground while the HQ elements of other battle groups provide the appropriate flanking depth and administrative input. Obviously, care must be taken when integrating the two types of exercises.

13. **Maintaining interest.** Field training exercises for large forces such as brigades tend to be characterized by periods of inactivity for troops since, in attempting to create real battlefield conditions long periods of waiting result. This will not be apparent to the staffs of the formation HQ concerned who will be more than occupied. Umpires and exercise controllers must ensure that realism is introduced into the battle during inactive periods to keep troops busy and maintain their interest. Methods of creating realism are discussed in detail in Chapter 8.

SECTION 2

PREPARATION AND CONDUCT OF FIELD TRAINING EXERCISES

GENERAL

1. **The Exercise Director.** The general form which the exercise is to take will be determined by the exercise director, who must decide on:
 - a. the lessons to be taught;
 - b. the formations, units and HQs which will participate;
 - c. the date and duration of the exercise;
 - d. a suitable exercise area which will teach the desired lessons;
 - e. the scale on which an enemy should be provided (one-sided exercises only);
 - f. the control and umpire arrangements in outline, including the source of umpires; and
 - g. whether estimates are to be completed by commanders prior to the exercise.

2. **The Staff.** Having received these decisions the exercise staff must take the following actions:
 - a. issue a warning order to all concerned;
 - b. prepare the general outline of the exercise so that the two sides will meet on the selected ground;
 - c. carry out a reconnaissance of the ground to verify the general outline with special reference to the area of first contact and potential subsequent actions of the main forces;
 - d. prepare an outline time-table to confirm that the probable course of operations fits in with the duration of the exercise;
 - e. prepare a draft of the exercise; and
 - f. submit the draft exercise to the exercise director for approval.

3. Having received the director's approval, the staff will then:
 - a. request outside assistance, if necessary;

- b. verify the availability of the exercise area;
- c. warn the civil police if large scale movement on public highways is involved;
- d. prepare an outline time-table and issue the exercise papers;
- e. prepare draft messages and orders for issue during the course of a one-sided exercise. (This is especially important in the case of minor exercises where the information to commanders is provided primarily by means of messages and written orders.); and
- f. arrange neutral communications.

4. **Outline of Events.** After the staff have sent warning orders to all concerned, their first task will be to prepare an outline of the exercise with its approximate timings. This, in its final form, will appear as an Outline of Events and be issued to control staffs and umpires, and on a one-sided exercise, to the controlled enemy. It can be simplified by the addition of a phase-line map.

5. A good exercise will require a great deal of thought, careful study of the map and in most cases considerable reconnaissance to ensure that the planned situations are practicable on the ground. The Outline of Events establishes the situations which are required on particular pieces of ground to teach the stated lessons and links them together in a realistic sequence.

6. The lessons should be applicable to each element of the troops being exercised. The type of ground which is suitable for a particular lesson on one flank may not necessarily be duplicated at the same time on the other. A lesson learned by the forward troops may not have involved the reserve.

7. Having selected the situations, it is necessary to fit them into a time-table. Some situations may be fixed in that they take place on a certain night or day. Others will be flexible. When the fixed situations are established it should be possible to determine whether it is better to work on timings from the end of the exercise backwards, from the beginning forwards, or from the middle outwards. An example of an Outline of Events is shown in Annex M.

8. One effective way of checking whether the Outline of Events has been designed well, and is likely to keep all units usefully employed, is to reproduce the information on a special table. This is squared off with the formation/units named along the top and the stages of the exercise down the side. When the matrix has been completed, it will be easy enough to see what every unit is doing at each stage and whether all units are being properly exercised. If necessary, additional incidents and situations can be inserted and the Outline of Events amended.

9. Finally, an examination should be made of the control, umpire and enemy actions required to generate a realistic sequence of events.

10. The Outline of Events should satisfactorily answer the following questions:
- a. Will the exercise director's lessons be taught?
 - b. Do all units get their share of activity?
 - c. Is the sequence of events tactically sound, and will it be realistic for the troops being exercised?
 - d. Does the tempo vary?
 - e. Does the exercise end on a high note?
 - f. Can the enemy and umpire organization cope with the proposed situations?
 - g. Is it simple?
 - h. Is it imaginative?
 - j. Is it flexible and does it allow scope for initiative?

PREPARATION OF EXERCISE PAPERS (STAFF DUTIES)

11. Work should commence on other exercise papers only after the Outline of Events is reasonably firm.
12. **General Idea.** The General idea provides a logical setting that gives the participants a basis for subsequent action. It contains all the information that both sides should know to initiate exercise preparations.
13. **Special Idea.** This provides information that would be known only to the side concerned. It is a combination of the latest situation reports, intelligence summaries and orders from superior HQ. It also gives the order of battle and disposition of the force at the disposal of the commander. It is therefore most important that it should be treated as "EXERCISE SECRET". It must be sufficiently complete for the commander of each side to make his plan, and for the exercise to be initiated in accordance with the exercise director's time-table.
14. **General Instructions.** These must be signed and dated and should include the following:
- a. the exercise director's lessons to be taught;
 - b. a list of participating HQ, formations and units (care must be taken, however, not to let opponents know each other's order of battle);
 - c. the time by which troops are to be in position and the time by which communications are to be established;

- d. date of issue of special instructions;
- e. method of control;
- f. instructions to umpires (see Chapter 8);
- g. an annex showing the arrangements for providing neutral communications;
- h. an annex giving a special list of code words which may have to be "EXERCISE SECRET";
- j. any special orders regarding scales of transport and vehicle lighting, etc;
- k. administrative arrangements may be issued in a separate "Administrative Instruction";

NOTE

General Instructions can be much reduced in size by referring to instructions and standing orders issued by the HQ in the area where the exercise takes place. Attention should be drawn to those standing orders at the beginning of the general instructions for any particular exercise.

- m. personalities, eg Exercise Director, Assistant Exercise Director, Chief Umpire, Senior Umpire;
- n. damage control and reporting of damage (annex);
- p. safety organization (annex);
- q. special Instructions Own Troops (annex) in a one-sided exercise only;
- r. manoeuvre rights;
- s. observers and press;
- t. NODUF (real) messages;
- u. scale and issue of blank ammunition and training expedients;
- v. processing of casualties, both exercise and real; and
- w. dispersal arrangements.

15. **Special Instructions.** These must be EXERCISE SECRET and their issue timed so that developments are not disclosed prematurely. They are used for the following purposes:

- a. to give opposing commanders instructions for preliminary moves to assembly areas;
- b. to give instructions to additional troops introduced as a surprise element; and
- c. to give a controlled enemy on a one-sided exercise the Outline of Events and the exercise director's personal instructions.

16. **Other Instructions.** Instructions to exercise controllers and umpires should include the Outline of Events. Instructions to neutral signals are usually issued as an annex.

17. **Distribution List.** Care should be taken that information about one side, or a skeleton enemy, is not seen by the other. It may be necessary to use three separate distribution lists, one for each side containing only their own order of battle, and one for the control and umpire staff, showing all troops taking part. A specimen distribution list for a brigade exercise is at Annex N.

18. **Security of Exercise Papers.** If an exercise is to be realistic, security is important, but difficult to achieve. Formations being exercised instinctively assume that they know the detailed order of battle of the opposing side. It is sometimes a good idea, therefore, to introduce unexpected reserves.

19. One method of reducing the possibility of the various instructions falling into the wrong hands is by using different coloured paper; eg, General Instructions and General Idea on white paper, Special Idea for enemy on green, own troops on blue, controllers and umpires on pink. In addressing envelopes, care should be taken that instructions intended only for control and umpires are clearly marked as such, or they may be opened by the staff of the formation or unit being exercised.

20. **Index.** Finally, an index should be included giving a brief summary of each annex or appendix forming part of a major exercise. This will save the time of officers who have to study one particular part of the exercise and are less concerned with the rest.

EXERCISE SETTING

21. Increased flexibility in conducting the exercise will be possible if the unit or formation being exercised is made part of a larger, imaginary force. The exercise director can then influence the course of the battle by describing the operations of the remainder of that force. Settings must be as simple as possible, and confined to the detail necessary to create the required operational scenario.

22. The commanders taking part in an exercise must be permitted to absorb the exercise atmosphere and the general idea gradually. They should not be confronted at the outset with unexpected problems which they have been unable to consider in a proper battle atmosphere. At this stage, the director can do much to ensure that the exercise starts well. Once the exercise papers have been issued by the staff, the director should discuss the situation with the commanders being exercised, assisting and coordinating where necessary.

MOVE TO EXERCISE CONCENTRATION AREA

23. Sufficient time must be given for the move to the exercise area of formations and units being exercised and the control, umpire and observer organizations, but not so much that the troops have nothing to do on arrival. Routes and timings should be included in the Special Instructions.

24. Adequate time must also be given for the establishment of control, umpire and observer HQs, their briefing, and the establishment and checking of all exercise communications.

CONDUCT OF THE EXERCISE

25. **General.** The success of an exercise with troops is, to a very large extent, dependent on the handling of situations by the exercise director, umpires and control staffs. The following points are important to remember:

- a. In a field training exercise, the opposing forces in the opening situation should be so deployed that main bodies do not become engaged almost as soon as the exercise starts. Both sides should be compelled to carry out reconnaissance and movement as a prelude to tactical manoeuvre.
- b. The General and Special Ideas should be issued in sufficient time for all troops to be put in the picture before the exercise starts.
- c. Tasks must be definite and worked in such a way that commanders see problems in the light intended.
- d. Commanders should have a reasonably free hand at the outset.
- e. The exercise can always be brought back on to the right lines by the issue of directives from the higher commander as outlined in Section 1, paragraph 11.
- f. Surprise situations should be introduced.
- g. The opposing forces must meet and fight on suitable ground.

26. **Action by the Exercise Director.** During FTXs the exercise director represents the superior commander on each side. Commanders being exercised should have the feeling that they are being commanded and controlled by a wise, realistic and helpful superior commander. The greatest care must be taken by the director not to impose his own ideas by over-controlling participating units.
27. **Control Organization.** The primary function of the control organization is to ensure that the aims of the exercise are met, to keep abreast of developments and to ensure that the exercise director is located where he is most needed at the right time. Control HQ is separate from both the umpire and neutral organizations. Any observer organization which may be required can usually be provided from the staff of the exercise director's own HQ. Orders and instructions from the director to each commander are passed by control HQ to the formation or the unit HQ. They in turn, should treat their rear link as a sub-station on the command net of control HQ. More detail is provided in Chapter 8.
28. **Umpires.** Details are contained in Chapter 8.
29. **Observer Organization.** This organization is seldom necessary but may be required to observe particular aspects and present summaries to the exercise director.
30. **Neutral Organization.** The tasks of the neutral organization are to deal with exercise casualties to men and vehicles by providing accommodation and then returning them as reinforcements to the exercise through the appropriate channels; and to handle any tokens used to represent supplies and equipment. Details are contained in Chapter 8.
31. **Neutral Routes.** Neutral routes should normally be outside the exercise area used by control and umpire staff and observers only when they do not need to use the exercise area. Nothing reduces realism more than a number of vehicles moving over ground between two forces which have not yet joined battle. Neutral routes should also be used for the return of PW and by any military traffic not part of the exercise.
32. **Damage, Repairs and Claims.** The administrative staff should set up an organization close to control HQ whose primary task is to receive reports on all damage which occurs, arrange for its immediate repair if possible, and for a designated officer to inspect and report on it. At the end of the exercise all damage should be repaired promptly. This will maintain good relations with landowners and usually result in permission being given to use the area for a subsequent exercise.
33. **Electronic Warfare.** It is important that commanders, staff and units learn to operate in a sophisticated enemy electronic warfare (EW) environment, and to appreciate and, plan for the degradation of their command and control systems. EW should always be included in exercises with troops. Its effects and employment are discussed in Annex P.

34. **Logistics.** The exercise setting should be such that combat service support elements are practised in the provision of ammunition, POL and supplies, and the recovery of vehicles. To ensure that administrative procedures are tested and exercised, it may be preferable to start the exercise with reduced holdings of fuel, ammunition and other consumables. The supply of water is usually not a serious problem, but the administrative staff must practise the selection and allotment of water points to formations and units.

35. Arrangements must be made for dealing with real, as distinct from exercise, casualties. Medical units must be practised in their duties in the field and on larger exercises, arrangements must be made to handle simulated casualties. Instructions must be issued for the disposal and feeding of exercise casualties and PW. (Refer to Annexes AB and AC.) Finally, there must be an opportunity to practice the repair and recovery of both real and exercise vehicle casualties.

36. **Sequence of Events.** Events sometimes develop faster in training than in war. This is necessary to increase the tempo of the exercise, to maintain interest and to ensure that all lessons are covered. The tempo of the exercise must, however, be realistic. Inactive periods are not always a waste of time since formations and units obtain valuable experience in looking after themselves in the field, and in preparing for future operations.

37. **Duration.** Long exercises are generally more valuable than short ones. This applies particularly to service support elements since administration will often not be properly tested until an exercise has been in progress for some days. A long exercise also helps to accustom troops to the daily routine of life in the field in different types of weather.

38. **Control.** If the opposing sides become interlocked in battle, control could be lost unless the exercise is stopped or a temporary standfast is imposed on both sides. The second alternative is unrealistic and therefore usually unsatisfactory. The first is effective only at the end of the exercise. The director should therefore seek to control the various manoeuvres and actions in such a way that close fighting is avoided until the end of the exercise.

39. **Distinction Between Real and Exercise Messages.** To avoid confusion a clear distinction must be made between real and exercise orders and messages. In an exercise it may be necessary to send:

- a. real messages (non-exercise real action subjects such as casualties, safety, compassionate, etc);
- b. drill messages (to exercise communications circuits);
- c. exercise messages (real exercise action required); and
- d. control messages (to be seen/actioned by controller staff only).

There must be conventions established for each.

ENDING AN EXERCISE

40. If an exercise finishes on a high note it should leave a positive impression on all participants. Exercises should never be allowed to drag on just for the sake of keeping troops in the field. Arrangements for returning troops to barracks must be efficient.

EXERCISE SUMMARY

41. At the end of the exercise, control HQ should collect and collate all the reports from its staff, the umpires and observers. These reports, which should be short and cover only the major strengths and weaknesses, will then be studied by the director before he holds his final Exercise Summary.

42. If the exercise has been a difficult one, it may be better to hold the summary indoors the day after the troops have returned to barracks. Alternatively, if reports are written shortly before and immediately after the exercise ends, it may be possible to arrange for it to be held outdoors while the exercise is still fresh in the minds of those who took part.

43. The director's summing up should be short and he should normally be the only speaker, outlining the sequence of operations and highlighting the main lessons which emerged. There may be occasions when other senior staff officers participate in the summing up.

CHAPTER 8

EXERCISE CONTROL AND UMPIRING

SECTION 1

INTRODUCTION

"A picture is worth a thousand words."

Mark Twain

GENERAL

1. The umpire, control and neutral organizations for exercises are established to ensure that the exercise director's aims are met and that those being exercised are given a realistic impression of battle conditions. This chapter and the related annexes provide practical guidance on the methods of operation of these organizations.

SECTION 2

CONTROL

AIM OF CONTROL

1. The purpose of the control organization is to ensure that the aims of the exercise are met.

TYPES OF CONTROL

2. The Chief Controller is the exercise director's chief staff officer and his link with the control organization. He may require an assistant to act as his deputy.
3. Higher Control is a staff representing the superior HQ from which the highest formation or unit being exercised receives orders and information, and to which information and requests are passed. It supplies information from all higher HQ. Supporting arms control forms a part of Higher Control and represents the arms commanders or advisers at the superior HQ.
4. Administrative Control is also part of Higher Control. It represents the logistics staff and service commanders and advisers at the superior HQ. Any neutral organization usually operates under the orders of Administrative Control.
5. Any Control is a staff representing all formations or units on the flank of the senior HQ being exercised. Flank Control will often be included in the Higher Control organization as opposed to being a separate entity.
6. Lower Control is a staff representing the elements below the lowest HQ being exercised. As with Higher Control, actions emanating from all units and sub-units are provided by them. They cover both operational and administrative functions.

TASKS OF CONTROL

7. The control organization has the same relationship to the exercise director as a staff has to its commander. Its task is therefore to implement the director's plan by the issuing of exercise narratives, instructions, orders, briefs and forecasts of operations, both before and during the exercise. These are discussed in more detail in Section 5. It is also responsible for identifying well in advance of the exercise those required to staff the control, umpire and neutral organizations. After the exercise, the control organization will be required to correlate the lessons learned and prepare the appropriate after action reports.

8. On large exercises, the media and spectators will require briefing. Usually, it will be found more satisfactory to establish and maintain a briefing room with up to date situation maps, where visitors can be briefed. This will prevent them from interfering with those actually controlling the exercise. Throughout the exercise, a narrative of events is maintained. This is the authoritative record of the exercise from which the brief for the exercise director's final summing up can be prepared. A specimen control brief is at Annex Q and a specimen forecast of operations is at Annex R.

9. On formation level exercises, in addition to the Master Outline of Events which provides overall timings for major exercise events, it will be necessary to develop supporting outlines for the specific use by particular control cells such as enemy, artillery, engineers, signals, electronic warfare, aviation/air, and administration. It is essential that the information in these special outlines is coordinated with the Master Outline of Events. A control co-ordination cell is essential to ensure that this is done.

SCALE OF CONTROL

10. The scale of control depends on the type of exercise. This can vary from an inter-platoon exercise directed by the company commander to a joint service, inter-allied exercise with its problems of language and differing logistics systems. The closer the exercise is to the soldier on the ground, fewer control staff will be required in proportion to umpires. The control staff organization should be based on that of the HQ which they represent, eg a divisional HQ for an inter-brigade exercise. Examples of the control organization for a formation indoor exercise or CPX are included in Annex S.

SECTION 3

UMPIRES

AIM OF UMPIRE ORGANIZATION

1. The purpose of the umpire organization is to give participants a realistic interpretation of battle conditions and to keep control informed of current and planned activity.

CATEGORIES

2. Umpires are categorized as follows:

- a. **The Chief Umpire** is the most senior umpire engaged on the exercise.
- b. **The Senior Umpire** is the most senior umpire of a force, formation or unit, eg senior umpire -x- Brigade; or, for a service, a member of the chief umpire's staff, eg senior artillery umpire. A senior umpire may have an assistant senior umpire to act as his deputy.
- c. **Unit Umpires** are allotted to any type of unit or sub-unit, including administrative units and sub-units.
- d. **Contact Umpires** are umpires whose function is limited to adjudicating the results of clashes between opposing forces.
- e. **Observer Umpires** are those appointed to observe particular points of training or administration.
- f. **Pool (liaison) Umpires** are umpires not specifically appointed to a unit or sub-unit and who are at the disposal of the chief umpire. They may be grouped into teams under a senior umpire. Pool umpires may also be used for liaison between umpire HQ.
- g. **Technical Umpires** are given the special tasks of observing and reporting on matters which require an in-depth knowledge. Their use can sometimes be avoided by attaching umpires of the same arm to the unit concerned.

3. Where possible, the umpire should be the same rank as the commander to whom he is attached and he should accompany the commander to orders groups. The umpire must be as tactical as the unit he is umpiring. Too often an umpire is seen on exercise to be absurdly prominent on the skyline while the unit he is umpiring is tactically concealed in dead ground. The umpire should always be as tactful and helpful as possible. He should never give the appearance of being an examining officer.

TASKS OF UMPIRES

4. The main tasks of umpires are:
 - a. to create the atmosphere of war by describing the sights and sounds of battle which are lacking on exercises;
 - b. to determine the results of contacts and assess casualties to men and material accordingly;
 - c. to influence commanders and individual soldiers to take action by describing the effects of hostile fire;
 - d. to keep the next senior umpire informed of the results of engagements, the intentions of commanders and the disposition of troops;
 - e. to ensure that safety regulations are imposed and obeyed; and
 - f. to observe and record the actions of those being exercised and submit reports as required.

5. The umpire organizations must be flexible and individual umpires must be capable of carrying out all or any of the duties outlined above. It will often be impracticable to require umpires with forward troops in close contact to record the actions of those troops. Their time will be fully occupied in creating the atmosphere of war, deciding the results of contacts and awarding casualties. This is a case where additional observer umpires may be required. On the other hand, umpires working with rear administrative units will have little to do except observe the activities of those units. Their reports will usually be technical as well as tactical.

6. Generally, an observer umpire organization will be unnecessary. Commanders and staffs at various levels will be quick to notice mistakes made by formations and units being exercised and will take the appropriate corrective action. Major points will similarly be quickly seen by the exercise director, just as they would be observed upon by a superior commander in war.

7. In some exercises, the director may want certain aspects of training observed carefully, particularly on lower level exercises and one-sided exercises where particular methods or lessons are being taught. In such cases, the director may appoint a chief observer to co-ordinate the reports of observer umpires.

SYSTEMS OF UMPIRING

8. The actual organization and method of operation of the umpire system will be influenced by the following:
 - a. the aim, scope and type of the exercise, and the ground being used;

- b. the number, type and nationality of the troops taking part; and
- c. the personnel, communications and transport available.

9. The two main systems are the unit system and the pool system. They must be considered as complementary to each other.

UNIT UMPIRES SYSTEM OF ORGANIZATION

10. Umpiring by units is based on the allocation of one or more umpires to each unit or sub-unit. Normally the umpires attached to a unit stay with that unit throughout an exercise.

11. It will rarely be possible to provide umpires on the scale of one for each sub-unit. The unit senior umpire will often operate his umpires as a pool to meet the tactical situations as they develop.

12. This system has the advantages of simplicity, continuity and ease of control. Confidence is established between the umpires and the unit. It allows for the actions of units to be followed continuously, even in conditions of great mobility, wide dispersion, difficult weather and darkness.

13. The disadvantages of this system are:

- a. The permanent dispersion of umpires may mean the employment of more than are absolutely necessary. On the other hand, the chief umpire can re-deploy umpires if the situation warrants.
- b. A pool of umpires will still be required.
- c. Finally, co-ordination between the umpires with two units in contact may be difficult to arrange and disparities in judgment and decision may arise.

POOL UMPIRES SYSTEM OF ORGANIZATION

14. Under this system, umpires form a pool and are allocated by the chief umpire to meet each situation. They may be moved from one unit to another, one area to another or one side to another. It is normal to have a basic organization of senior umpires, each with a number of umpire teams under their control.

15. The briefing of umpires for a particular situation is easy and one senior umpire can control the umpires with both units in contact. This briefing produces uniformity in making decisions and the decisions are likely to be closer to those which would occur in war. It also allows for the number of umpires to be increased or decreased for each particular situation. Economy in umpires is thus achieved, possibly at the expense of continuity, confidence and simplicity.

16. The pool umpires method is dependent on all umpires being mobile with adequate and reliable radio communications. As well, it restricts the number of personnel who can be selected as umpires due to the need to have an intimate knowledge of the tactics of all arms.

SCALES OF UMPIRES AND UMPIRE LOGS

17. The following information is provided in the annexes:

- a. Specimen Umpire's Log - Annex T.
- b. Suggested Scales of Umpires - Unit System - Annex U.
- c. Suggested Scales of Umpires - Pool System - Annex V.

18. In addition to operational logs, umpire reports will be of value if they are given guidance on what to observe and report. This can be achieved through the preparation of umpire check lists. Check lists should be prepared for each level of umpires and will vary according to the aim, level and scope of the exercise. An aide-memoire is at Annex Z.

SELECTION OF UMPIRES

19. The value obtained from field exercises depends largely on the care with which umpires are selected. Without good umpiring, realism is not achieved, interest lags, false conclusions are drawn, and a feeling of general frustration and irritation is aroused in the troops. Not all umpires need be officers. Not only will the drain on units be too severe, but NCOs are essential for many aspects of umpiring. They are particularly useful for technical and administrative umpiring, representing the effects of artillery fire and umpiring the action of units on encountering obstacles, demolitions, minefields or contaminated areas. Similarly, NCO administrative umpires will be required to report on specific administrative arrangements such as ammunition supply, evacuation of casualties, traffic control and vehicle recovery.

20. Good umpires should combine the qualities of a good actor, sports commentator, war correspondent and mind reader. They should display energy, imagination, inquisitiveness, foresight, tact, and common sense. They must have a sound tactical knowledge, be physically and mentally fit and able to remain alert despite lack of sleep. They must be at least as experienced, competent and energetic as the troops they are umpiring. Such paragons are few and far between, but it should be clear that only the really good officers and NCOs in a unit should be selected as umpires.

21. To ensure that the most suitable officers are detailed for duty as umpires, they should be selected from a formation, unit or sub-unit that is not participating in the exercise. The full resources of that unit's transport, communications and field kitchens can then be made available to the umpire organization. Also, the umpires themselves are accustomed to working together and an established chain of command remains intact. The appropriateness of this arrangement will be determined by the scale of umpires that is needed.

TRAINING OF UMPIRES

22. Officers and NCOs must be trained to act as umpires. Formations and units should conduct short umpires' courses and arrange periodic umpiring exercises. Exercises should be designed to practise officers and NCOs in methods of control, painting the picture and providing the required information. A suggested two day training programme for umpires is given at Annex X.

23. All umpires must be trained to deal with situations created by fixed wing aircraft and attack helicopters since actions may be conducted in any part of the exercise area. Some "Do's and Don'ts" for umpires are given at Annex W.

UMPIRE SUPPORT DETACHMENTS

24. As explained above, umpires should be the most highly trained personnel available. This limits the number available and makes it uneconomical to employ them on routine tasks. Support detachments are therefore provided for this purpose, operating under command of the umpire organization and allotted as shown below.

25. **Minefield and Demolition Police** are allotted by the senior engineer umpire to enable unit umpires to add realism to exercise minefields and demolitions. They are briefed in writing by the umpire with the unit or subunit who laid the minefield or originated the demolition. The tasks of minefield and demolition police are:

- a. Stop or limit the passage of military foot or vehicle traffic in accordance with their instructions.
- b. Show their written brief to umpires. The latter are responsible for giving the troops to whom they are attached as much information as they would know in war.
- c. If signs are issued, they are responsible for their posting and safeguarding. They are also responsible for safeguarding any stores left on site.
- d. Remain in position until ordered to move by their own HQ or by an umpire. In the latter case a written order should be given. It is important that minefield/demolition police not disclose the position of a minefield or reserve demolition by appearing prematurely.
- e. They are not responsible for awarding casualties, this is the task of umpires.

26. **Fire Marker Parties** are allotted by the senior artillery umpire to artillery units armed with equipments firing ground to ground weapons. They operate under command of the senior unit umpire. Their tasks are:

- a. to represent artillery fire to the umpires in the target area;

- b. to use training expedients in that area; and
- c. they will not award casualties, this is the task of the umpire in the target area.

27. When fixed wing air support and attack helicopters are available, means of umpiring their actions must be examined. A possible approach is to use the artillery fire marker teams for air and helicopter fire effects, as well as for artillery. Umpires can be deployed with the scout helicopter of an attack helicopter tank hunting team. This platform and communications may also satisfy the requirements for offensive air support umpiring.

28. **Battle Simulation Teams** operate under command of the chief umpire. Their task is to add realism to the battle by producing the noises of war. They require time to replicate the best effects and should only be used to simulate fire during deliberate attacks. The simulation of fire during encounter battles should be left to the umpires.

PHANTOM UMPIRE UNIT

29. Although information reaches control through the umpire net, in large exercises these channels may be too cumbersome to give control adequate time for planning. In such cases a phantom umpire unit may be used. This unit is deployed with officer patrols to HQ and forward units. It operates directly under the chief umpire who tasks them as required.

30. Their primary task is to report directly to the chief umpire's HQ on the situation and the intentions of the formation or units with which they are deployed. A minimum number of radio links are employed. By this means, the chief umpire is guaranteed current information for use by controllers.

SECTION 4

NEUTRAL ORGANIZATION

AIM OF A NEUTRAL ORGANIZATION

1. The purpose of a neutral organization is to deal with exercise casualties of personnel, vehicles and equipment, and to handle any tokens used to represent real stores.

TASKS

2. The tasks of a neutral organization include:
- a. the receipt of exercise wounded at one stage higher than the most rearward echelon of the medical system being exercised, and to return them to the reinforcement system;
 - b. the receipt of exercise dead and PW and their return to the reinforcement system;
 - c. the administration of all such men while in their hands;
 - d. the receipt of vehicle and equipment casualties at one stage higher than the maintenance system being exercised, and to return them through the replacement system; and
 - e. the collection of tokens representing stores from the receiving end and to return them to their starting point.

SCALE

3. The size of the neutral organization will depend on the taskings foreseen at the most intense stage of the exercise.

METHOD OF ORGANIZATION

4. The neutral organization should be based on:
- a. a reception area for personnel;
 - b. a reception area for vehicles and equipment; and
 - c. a pool of transport.

It will be commanded by an officer attached to Control HQ.

5. The following points must be noted:

- a. All vehicles will be marked as neutral and given well marked routes on which to travel. It is most desirable that these routes be outside the exercise area.
- b. Adequate missing arrangements will be required.
- c. Personnel being processed must not be separated from the vehicles or equipment for which they are responsible.

SECTION 5

CONTROL AND UMPIRE COMMITMENTS

GENERAL

1. The ultimate success of any exercise depends to some extent on the effectiveness of the control and umpire staffs. Much advanced preparation and study are required. It is vital, therefore, that controllers and umpires receive adequate, early notice.
2. One of the essentials in preparing exercises, both with and without troops, is the Instructions for Control and Umpires. These must be classified "EXERCISE SECRET" and include the following:
 - a. the composition of control and umpire staffs;
 - b. the date, place and time for umpires' conferences before the exercise and reconnaissance of the ground;
 - c. the location of HQ control and chief umpires during the exercise;
 - d. an Outline of Events describing the main situations with approximate timings, probable action by troops, and action by umpires;
 - e. a brief for umpires, where applicable;
 - f. an allotment of transport, dispatch riders, and means of communication;
 - g. the arrangements for collecting and disseminating information during the exercise;
 - h. the arrangements for, and frequency of, reports during and after the exercise;
 - j. the arrangements for accommodation and messing; and
 - k. the date, place and time of umpires' conference at the conclusion of the exercise.
3. A table to assist staff officers in detailing control and umpire staff is at Annex Y.

PREPARATION BEFORE AN EXERCISE

4. The following must be understood clearly by all control and umpire personnel:
 - a. the general outline of the exercise;
 - b. the initial location of the HQ engaged, whether indoors or on the ground;

- c. the detailed situations in their own and nearby areas;
- d. the layout of the control and umpire organization;
- e. what incidents they will handle and the likely reactions of commanders and troops involved;
- f. what reconnaissance will be necessary for specific incidents; and
- g. what messages and report pro-formas can be prepared in advance.

CONFERENCES

5. A series of control and umpire conferences will be held before, during, and after the exercise. Initially, after written instructions have been forwarded and enough time has been allowed their absorption, the exercise director or chief umpire will call the first conference to cover such matters as the aim, scope, lessons, plans of commanders (or opposing commanders if the exercise is two-sided), systems of control, and method of reporting. This is followed by other conferences on a lower level as required. During the exercise, controllers and umpires will hold conferences to discuss progress as a whole or certain specific actions. Discussion of progress is the task of the chief and senior umpires based on reports from their subordinates and will take place at selected intervals or when major changes in the situation occur or are required.

6. Incidental discussions between umpires will frequently be required to stabilize situations. If an action appears to be getting out of hand, umpires should halt it for consultation. However, this is most irritating for the participants and requires careful timing and judgement. The key to good umpiring is that before an action takes place, the umpires with the opposing forces **MUST** meet and decide how that particular action would develop in battle.

RECONNAISSANCE

7. On outdoor exercises, the reconnaissance is closely related to the initial conference. Most actions, whether pre-determined or spontaneous, must be considered on the ground before they start. It must be clear in advance how the action is to be controlled, how much latitude is to be given to each side (this depends on the relative strengths and positions at the time) and what scale of umpires is required. Where a large attack is scheduled, senior umpires, after consultation and reconnaissance, may decide to call in extra umpires from pool and reserve sources. Night operations always require extra umpires. In this case, the reconnaissance should be by day.

REPORTS

8. Timely reports on the tactical situation and the forecast intentions of formations, units and sub-units must be submitted through senior umpires to the chief umpire who can then ensure control is informed. From this information, and from his personal visits, the exercise director can then decide what action, if any, to take to create the situation he wishes. Umpire reports should be initially verbal, then written.

9. Significant events are reported at once. Routine reports are normally submitted in the morning and evening, or as specially ordered. These reports normally include three headings:

- a. tactical,
- b. technical, and
- c. administrative.

It is important that umpire instructions establish the level at which routine reports are submitted. This will depend on the level of the exercise. Much time can be wasted by routine reports being written when a short conference by senior umpires could quickly produce a satisfactory summary of the situation. Junior umpires should be moving around on the ground and not sitting in their vehicles writing reports.

10. It is essential that umpires be included on the distribution lists of written orders and unit confirmatory notes to verbal orders. This saves the umpires much time and ensures that the commander's orders are accurately reported.

11. Umpires with armoured and infantry units will frequently be far too busy carrying out their functions of painting a realistic picture of the situation and adjudicating on actions to submit routine reports. In this case the exercise director may decide to allot observer umpires to such units. Observers will normally be required to keep a log recording the actions of those taking part and making observations on them.

12. Before the exercise, umpires should receive a detailed summary of the tactical and administrative points on which the unit is being practised. This should take the form of a questionnaire which is adapted to conform to the exercise. An example of an aide memoire for umpires is given for guidance at Annex Z.

13. The chief umpire may require a written final report from each umpire, although it is usually best to receive a verbal report at the conclusion of the exercise. The final report must contain constructive criticism, include good points as well as bad, and be precise as to when, where and in what circumstances a mistake was made. A misleading or inaccurate exercise report will justifiably cause irritation to the units being criticized by the umpires.

LOGS

14. Logs are the detailed record of the exercise and are kept in duplicate by those who submit routine reports. One copy is attached to each routine report, the other to the final report. A specimen umpire log report is shown at Annex T.

SECTION 6

COMMUNICATIONS

GENERAL

1. The provision of an adequate and reliable communications network for the control, umpire and neutral organizations is vital. Umpires should normally be allotted two nets; one of the frequency of the unit being exercised, and the other on the umpire net. If only one radio is available, it should remain on the unit net and be flicked to the umpire net as necessary.

RADIO COMMUNICATIONS

2. Higher control, representing higher and flanking HQ operates on the normal operational nets to the rear links of the highest HQ being exercised. Lower control similarly operates on the forward link of the lowest HQ being exercised.

3. Umpires are of necessity mobile in any outdoor exercise. They must therefore be equipped with vehicle-mounted radios. Consideration must be given to the provision of rover sets for senior umpires.

LINE COMMUNICATIONS

4. In major exercises, the use of line is justified. It may be possible to economize in the use of signal personnel by using extensions from, and if necessary, additional lines between operational exchanges. This must not be done if there is any risk of overloading the facilities available to the detriment of their intended functions.

5. The use of civilian facilities can also reduce the requirement for signal personnel. Arrangements for repayment will be required, and considerable notice to the civilian authorities must be given.

6. In indoor exercises, where distances are small, a telephone network can be used to represent radio nets.

7. The provision of teleprinter links for higher formation exercises should be considered.

DISPATCH RIDERS

8. If the radio and line systems are operating satisfactorily. Such traffic which must be sent by hand can usually be dispatched through operational dispatch riders. If there is any risk of units becoming so far separated that radio is unlikely to be efficient, pool of dispatch riders should be available for allocation by the chief umpire.

SECURITY

9. Umpires tend to neglect the rules of security. Important information can be given to an enemy or potential enemy just as easily on umpire as on operational nets. It must also be remembered that civilian telephone facilities are not secure. In addition, permitting poor security on umpire nets is bad training for the officers, NCOs and signallers concerned. Codes must be issued and their use enforced.

10. Operational sets are often in a position to overhear traffic on umpire nets either accidentally or by design. Important information which would not be known in war may thus become available to those being exercised. This can ruin an exercise and must be guarded against.

SECTION 7

ADMINISTRATION OF CONTROL, UMPIRE AND NEUTRAL ORGANIZATIONS

ADMINISTRATION

1. **Rations and Accommodation.** Under the pool system it is essential that umpires are self-contained; under the unit system it is desirable. In either case, all mobile umpire detachments must be organized on a self-contained vehicle basis. If complete units or sub-units are used for umpiring, more cooking equipment will be available, but additional field kitchens may be required for detachments. Ration packs provide a simple answer to emergency situations. Messes will be required where the size of control, umpire or neutral organization staff justify them. On small exercises, umpires may be attached to the unit with which they are operating for rations and accommodation.
2. **Transport.** An adequate supply of transport must be available. The major portion will be allotted permanently to individual umpires, with a pool at higher HQ. Arrangements must be made for the repair and replacement of unserviceable vehicles. A reserve of transport will therefore be required.

SIGNAL ORGANIZATION

3. It has been stressed that the exercise cannot be controlled efficiently without adequate communications. Where possible, a separate signal unit or sub-unit should handle neutral and umpire communications. When one is not available, consideration should be given to forming one in order that a signal officer has clear responsibilities for operating and maintaining this communications system.

SECTION 8

SPECIALIST UMPIRING

ARMOUR

1. Due to the mobility, shock action, ranges and firepower of tanks, armoured battles are difficult to umpire realistically. Umpires must have a full knowledge of the tactical situation and know the detail of orders given to the squadron and troop leaders. Umpires are required down to troop level.
2. Safety precautions may tend to make tank action unrealistic and preclude tanks from moving in close proximity to infantry at night. When there is any danger to other troops, umpires must stop or slow tanks, and order other troops to stand up. Camouflaged equipment may have to be pointed out to tank commanders so they do not overrun personnel or equipment.
3. **Tasks.** The primary tasks of umpires with armoured units are:
 - a. to realistically allot casualties; and
 - b. to ensure that safety regulations are obeyed.
4. **Method.** Umpires should move in vehicles with a comparable cross-country performance to the tanks they are accompanying. They require two radio sets; one on the umpire net, the other on listening watch on the unit or sub-unit net. The latter is used for painting the picture and safety orders. In small, controlled exercises where particular tactical lessons are being taught, umpires may travel in squadron and troop leaders' tanks, subject to applicable safety regulations.
5. Reconnaissance of the opposing side is essential to enable an estimate of the comparative effectiveness of the fire of both sides and for safety reasons.
6. Casualties will be awarded based on:
 - a. the number and type of tanks and anti-armour weapons on both sides;
 - b. the advantages held by concealed tanks or anti-armour weapons sited in positions of their own choosing;
 - c. the range at which fire is opened;
 - d. the degree of artillery and other forms of support;
 - e. the effectiveness of minefields and obstacles;
 - f. the formations used by tanks and their use of ground, smoke, mist, darkness or surprise;

- g. the tactical handling of anti-armour weapons, their concealment, siting and the range at which they open fire; and
- h. the degree of infantry/tank cooperation.

7. **Method of Awarding Casualties.** When a tank is judged to be a casualty, it will be ordered to halt and show a yellow flag. If it is desired to exercise the evacuation and repair of tanks, the tank commander will be informed of the damage the tank has suffered. The vehicle will remain where it is until repair or recovery action is completed. In other cases, the tank commander will be informed of the period for which the tank is out of action, after which he may rejoin his unit. Umpires will be issued with a table showing the effects of anti-armour weapons against armoured fighting vehicles. Tanks may also indicate they are casualties by elevating the main armament to maximum and reversing over the rear deck.

8. **Armoured Reconnaissance.** Umpiring of armoured reconnaissance is essentially identical to that described in paragraphs 1 to 7. Umpires must be provided to patrol level, at least to those patrols within the troop/squadron most likely to come into contact. This may be achieved by either assigning a maximum of two umpires per troop or by pooling umpires at squadron level and assigning them as required by the squadron's deployment.

ARTILLERY

9. **General.** The effect of artillery fire can best be shown by the lavish use of pyrotechnics to simulate fire. These will usually be available in insufficient quantities and there must be limitations on their use. Umpires with troops under fire must be told the intensity, duration and type of fire, including that originating from nuclear weapons.

10. **Tasks.** The primary tasks of umpires with artillery units are:

- a. to represent to the umpires with the enemy the fire of their unit; and
- b. to allot casualties realistically to the unit to which they are attached.

11. **Method.** It will usually be comparatively simple to arrange for timed fire programmes to be represented as there will be time to pass the information to the umpires with the other side. Impromptu engagements can only be portrayed by the rapid deployment of a fire representation party to the area being shelled, where contact is established with an umpire. Fire representation parties should be located in the enemy area and be in radio contact with the umpires controlling them.

12. Before representing fire, artillery umpires will check:

- a. that guns and ammunition are available; and
- b. that the technical work at the OPs and guns is carried out correctly.

13. There will seldom be enough fire representation parties or pyrotechnics to engage every target. Resources should only be used to represent that fire which could have direct and significant effects on the battle.

14. Arrangements can be made for the use of blank ammunition or pyrotechnics at gun positions if the counter battery organization and locating units are to be practised. To avoid unnecessary expenditure of pyrotechnics, liaison will be required between umpires on both sides to ensure that guns are represented as firing when the locating devices are deployed.

15. Umpires attached to artillery units will allot casualties to the unit to which they are attached in the event of enemy attack by any means, including counter battery fire.

ENGINEERS

16. **General.** In many cases, the work which is given to engineer units cannot be carried out because of the damage which would be caused to private property. It is difficult to depict an obstacle realistically without the use of large quantities of explosives or extensive earth moving. Engineer umpires must ensure that the portrayal of the effects of engineer effort is as realistic as possible.

17. **Tasks.** The primary tasks of umpires with engineer units are:

- a. to ensure work is realistically conducted in relation to the tactical situation;
- b. to estimate the success of any engineer operation in accordance with the time, personnel, tools and stores available, and the method employed;
- c. to ensure that personnel, tools and stores are on the site for the correct length of time to complete a task, in the event that work cannot be carried out because of the damage likely to be caused;
- d. to ensure that the effects of engineer work are realistically depicted to other participants and umpires, especially delays caused by demolitions and casualties inflicted by minefields; and
- e. experienced umpires should always be selected to accompany an engineer unit engaged on bridgeheads, obstacle crossings and route clearances.

18. **Method.** Mine fields not laid by engineers should be seen by an engineer representative who can assess their effectiveness. The engineer umpire is responsible for briefing the local umpire. Practise or phoney mines should be laid whenever they are available.

19. **Demolitions can seldom be real.** All simulated demolitions will be clearly marked by umpires to indicate the extent of the damage.

20. Minefield and demolition police are allotted by the senior engineer umpire to specific minefields or demolitions. Engineer umpires are responsible for:

- a. briefing the minefield and demolition police with a sketch showing the extent of the minefield or demolition;
- b. ordering the restriction of movement to be imposed by the minefield and demolition police through or over the minefield or demolition; and
- c. posting the minefield and demolition police. In the case of minefields, the police must ensure that they do not prematurely disclose the position or existence of a minefield.

The tasks of minefield and demolition police are stated in Section 3, paragraph 25.

21. An example of a minefield/demolition card for use by engineer umpires and military police is shown below.

FRONT

EXERCISE DEMOLITION REPORT

1. Sketch showing extent of DEMOLITION.
2. Grid reference of DEMOLITION.
3. Date and time DEMOLITION blown.
4. Brief details of DEMOLITION.

Signature of Engineer Umpire

BACK

EXERCISE MINEFIELD REPORT

1. Sketch showing extent of MINEFIELD.
2. Possible diversion.
3. Details of mines and/or booby-traps incorporated.
4. Other details likely to be of help to umpires with advancing troops.

CHEMICAL WARFARE

22. **General.** All umpires must know the effects of chemical weapons and the action required to avoid casualties and decontaminate personnel and equipment.
23. **Tasks.** The tasks of umpires are:
- a. to portray the use of chemical weapons by means of pyrotechnics;
 - b. to advise unit umpires of the effects, taking into account the temperature, wind direction and speed, turbulence, ground and weapons used;
 - c. to assist unit umpires in portraying the effect realistically to the troops;
 - d. to ensure that safety precautions are observed and that civilians are not affected;
 - e. in the case of persistent agents, to brief and post chemical warfare police.
24. **Method.** Umpires will normally operate as a pool under the chief umpire. When chemical agents are to be used, a number of specialist umpires will be dispatched to the delivering unit which will brief them. The specialist umpires will then move to the target area.
25. **Training Expedients.** A training system of burst simulators is currently nearing production. Use of the system will permit umpires to simulate (with non-lethal chemicals) the effects and duration of various chemical attacks. The simulants will force realistic action such as masking, closing up or wearing protective clothing and equipment.

SECTION 9

NUCLEAR UMPIRING

GENERAL

1. The use of nuclear weapons on exercises makes the task of the umpire organization more difficult due to the large area affected, the number of casualties involved and the consequent abrupt changes in exercise situations. It is most important that umpires be instructed in nuclear warfare before taking part in such exercises. A minimum of two days will be required for this instruction and it should cover nuclear tactics, weapons effects and the characteristics of nuclear delivery systems. Without this basic knowledge, umpires cannot be expected to paint the picture properly.

2. On exercises involving the use of nuclear weapons, the aims of the exercise and the lessons in nuclear warfare which are to be brought out must be made very clear. In order to obtain the best value from the exercise, a decision must be made as to how much realism concerning nuclear effects can be sacrificed and still generate the appropriate reactions by the forces involved. See paragraphs 6 to 8. For example, it would obviously be wrong to inflict such destruction on our own forces as to bring the exercise to a standstill.

3. As the umpiring of both friendly and enemy nuclear strikes differs considerably, these subjects are discussed separately below. Much of the information required by umpires should be made available in exercise standard data including details of nuclear weapons, methods of calculation and specimen proformas, etc.

FRIENDLY NUCLEAR STRIKES

4. The requirements for nuclear umpires are:

- a. They must be familiar with the tactical plans of friendly forces, particularly their fire plans.
- b. They must be familiar with the procedure for selecting, analyzing and striking targets.
- c. They must be capable of assessing the effects of friendly nuclear strikes in conjunction with exercise standard data for the assessment of nuclear casualties and damage. As a general rule, if a strike is correctly planned, and the weapon and delivery units are available, the nuclear umpire should be prepared to accept it. If, however, it is necessary to influence the course of the exercise so that these results are not achieved, the nuclear umpires can either:
 - (1) prevent the strike;
 - (2) let the commander expend his weapons on unimportant targets; or

- (3) allow the enemy to overcome the effects.

ENEMY NUCLEAR STRIKES

5. The requirements for nuclear umpires are:
 - a. They must be familiar with the method of representation of the explosion and ground zero.
 - b. They must know the enemy nuclear capability including the yield and effects of the weapons and the availability of delivery units. This will normally be included in exercise standard data.
 - c. They must be capable of making a rapid assessment of the effects of a nuclear strike by a simple means such as the template method.
 - d. They must be kept informed of the time, location, burst height, yield and means of delivery of all nuclear strikes taking place in their area of responsibility. The actual allocation of casualties to friendly forces is discussed in paragraphs 14 to 16.

NUCLEAR REALISM

6. Nuclear umpires will not achieve the best results from exercises unless they are able to create the confusion and uncertainties of nuclear warfare. In the case of friendly strikes, this is achieved by a simple method of relating actual ground zero and burst height to that desired by the commander, bearing in mind the accuracy and reliability of the delivery means. The details of this method should be part of exercise standard data.
7. Information on nuclear strikes is available to troops in two forms - basic and circumstantial. Basic information is that which may be apparent to the troops in close proximity to ground zero. This information consists mainly of time of burst, location of ground zero, burst height, yield and, possibly, the means of delivery. Of these, only the time and location will be known quickly. Burst height and yield will always have to be estimated afterwards as a result of subsequent information, which in the case of exercises should be given by the umpires. This additional information would include such items as state of ground, size of the fireball, etc. It is improbable that the actual means of delivery could be reliably established.

8. Circumstantial information will come from observers outside the major effects radii of the nuclear weapon. Thus, umpires who may be many miles from ground zero must be ready to provide this information. The information will come from observation, including reconnaissance, and from reports of survivors. For example, an air defence unit in the vicinity may report tracking an unidentified aircraft just before the burst which would give an indication of the delivery means. Survivors' reports would normally be confused and contradictory. Nuclear umpires must be able to assess the effects of a nuclear strike on communications when giving this type of exercise data.

FALL-OUT

9. The problems involved in representing radioactive fall-out patterns in exercises are considerable. Directors of these exercises should be quite certain that they have the organization and umpire staff available to cope with the requirement if needed. In addition, they must ensure that the results of fall-out on the troops does not adversely affect the exercise. Unless there are a large number of nuclear umpires available, all surface and sub-surface bursts must be pre-planned, probably as much as twenty-four hours in advance, in order to ensure the correct setting. Realism will only be created if no information is provided by the umpires other than that which can normally be expected in war.

10. Information on fall-out will be made available to those taking part in an exercise by the following means:

- a. warning of impending fall-out from higher, lower or adjacent formations and units;
- b. presumption of fall-out by observation of a fireball during detonation or detection of a crater at ground zero;
- c. unwarranted increase in the radiation level in the unit area detected during routine measurements with monitoring instruments;
- d. radiological reconnaissance made after fall-out has occurred; or
- e. onset of symptoms of radiation sickness such as nausea, malaise and diarrhoea. Sufficient time must elapse after detonation before these effects can be introduced realistically.

11. Fall-out patterns are dependent on the yield of the weapon and the various wind speeds and directions from the surface of ground to the top of the mushroom cloud. It may therefore be necessary to introduce exercise weather in order to plan the fall-out pattern sufficiently in advance. If, however, actual weather conditions are used, it is essential that nuclear umpires understand that it takes time for fall-out patterns to materialize on the ground. Fall-out travel time should be carefully analyzed before it is introduced in any downwind area.

12. Nuclear umpires must also be aware of the radiological decay rate so that they can adjust the contaminated area and continue to describe a realistic fall-out picture. This problem also applies in the case of induced radioactivity for all types of bursts.

LOGISTICS

13. The rules for nuclear umpiring outlined above apply equally to logistic units and installations. If the exercise is to be realistic, nuclear umpires will require additional instructions regarding post strike status as outlined below:

- a. post strike status of military installations and supplies, including civilian facilities in direct support of military installations;
- b. post strike status of both military and civilian transport and communications; and
- c. post strike status of the civilian population, civil defence organization, civil labour forces and population centres.

ALLOCATION OF CASUALTIES

14. The allocation of casualties under fall-out conditions presents no great difficulty to the nuclear umpire since he will have time to assess the effects and warn the personnel concerned. But for those persons within the effects radii of a nuclear weapon, the casualties will all be incurred at the same time and in such large numbers that it will be impracticable for the nuclear umpires to warn individuals.

15. The most satisfactory method by which realistic effects of nuclear strikes can be made by a relatively small umpire force, is by allotting casualties on a unit or sub-unit basis. In the case of an infantry battalion for example, the nuclear umpire could put the whole battalion, or individual companies or platoons, out of action according to their distance from ground zero and their state of preparedness prior to the strike. The period of "stand-still" would be in accordance with the assessment of damage made by the umpire. As a general rule, casualties should not be out of action longer than the length of the immediate phase of the exercise in which they were involved at the time of the strike.

16. Although this method of making unit and sub-unit casualties may seem unfair to the troops, it has the advantage of creating the conditions of nuclear warfare where sudden fluctuations in the order of battle are likely to occur in a matter of seconds. Casualties will remain in situ unless nuclear umpires have been specifically briefed that casualty evacuation should be practised.

SECTION 10

ADMINISTRATIVE UMPIRING

GENERAL

1. Due to the results of nuclear strikes and offensive air support attacks, heavy demands will be made on the service support units to make good losses suffered by themselves and forward troops. Heavy casualties, loss of materiel and the danger of enemy breakthroughs require careful consideration when umpiring administrative units.

TASKS

2. The primary tasks of administrative umpires are:
- a. to inform tactical umpires if operations which have been or are likely to be ordered, are logistically possible;
 - b. to allot casualties in the event of enemy attack by any means; and
 - c. to observe and report on the tactical and technical handling of administrative units.

METHODS

3. **Transport:**
- a. Any failure in the issue of combat supplies will quickly become apparent by their absence at the receiver's end. A direct effect will be obtained.
 - b. Ammunition can be simulated by sand-filled boxes or by a coupon system. All umpires at issuing and receiving units must ensure that:
 - (1) the number of vehicles for the amount of ammunition to be carried is correct;
 - (2) adequate time is allowed for loading and unloading; and
 - (3) loading parties are available.
4. **Medical.** Both real and exercise casualties will have to be considered. The following points should be noted:
- a. Exercise instructions will describe how real casualties will be handled. It may be convenient to send them directly to specified military or civilian hospitals.

- b. A label system, or simulated casualties, may be used for exercise wounded. They are evacuated through normal medical channels to the rear as treatment requirements dictate. From there they will be returned to the neutral reinforcement unit.
- c. Experience has shown that in most exercises only a proportion of exercise wounded are evacuated. Umpires must note the percentage of casualties awarded. In the case of key men, umpires must be firm. At the same time, if units are short of personnel, discretion must be used or the value of the exercise may be lost.
- d. Exercise dead are not evacuated through medical channels. They are either placed out of action for a specified period of time, after which they rejoin their units, or they are evacuated by a neutral organization to the reinforcement unit. It may be necessary to set up collecting posts for exercise dead.
- e. Exercise instructions must state what disposal arrangements are to be made for the weapons and equipment of both real and exercise casualties. In the latter case, the personal weapons should never be removed from the individual unless ordered otherwise.
- f. More detailed information on medical umpiring is contained in Annex E to B-GL-313-001/FP-001, Medical, Volume 1, Medical Services in Battle.

5. Supply and Maintenance:

- a. Real casualties will be handled through the standard channels. The vehicle or equipment is returned to units or backloaded in the normal manner.
- b. A label system can be used for exercise equipment casualties. Repairable items will be backloaded through the normal channels, a reasonable time allowed for repair and then they will be returned to their units.
- c. Exercise vehicle casualties totally destroyed or beyond the repair of the highest repair unit being exercised will be backloaded to a neutral dead vehicle park. Forward delivery squadrons may be used to man vehicle parks for armoured fighting vehicles. Demands made by the highest supply unit being exercised will be met from these vehicle parks. In smaller exercises, it may be preferable to put vehicles out of action for a specified time and allow them to remain in situ. In view of the difficulty of moving exercise vehicles, particularly tanks, dead vehicle parks should be set up very close to the battlefield.
- d. On very large exercises, it may be possible to provide the supply system with a pool of vehicles and equipments from which to issue.

- e. With peacetime accounting, there is rarely the time or the staff available to hand over vehicles and equipment in the proper way. It is therefore necessary for the driver, or a member of the unit concerned, to accompany the vehicle or equipment until it is eventually returned to its unit.
6. PW will be handled by formations being exercised as far back as their organization permits. From there, they will be evacuated in neutral transport to the neutral reinforcement unit which will be responsible for their feeding, accommodation and subsequent return to their units.
7. A system of tokens can be used to umpire other items of supply, and umpires must control their handling carefully. Otherwise realism will be lost.

SECTION 11

IDENTIFICATION OF UMPIRES, CONTROLLERS, OBSERVERS AND ENEMY

COLOURS

1. In all exercises with troops, colours to mark personnel, vehicles and installations are suggested as follows:

Group	Detail	Colour
A	Control and Umpires	White (Note)
B	Observers	Green
C	Enemy	Bright Red

NOTE

Except in Norway, where blue may be used when vehicles are painted white for winter conditions. For winter conditions, Norway will issue its own directives.

MARKINGS

2. Markings in the appropriate colours should be worn or carried as follows:
- a. **Personnel.** An armband approximately four inches wide worn around both upper arms.
 - b. **Vehicles and Aircraft.** Diagonal crosses of appropriate size on the front, top, sides and rear of vehicles, and on the sides and bottom of low performance aircraft.
 - c. **Headquarters Communication Centres and other Installations.** Control and umpire HQ communication centres, and other neutral installations must be marked with conspicuous white flags. Diagonal crosses, with arms at least one metre long, should be displayed to indicate their neutrality to aircraft. These HQ centres and other neutral installations should not be camouflaged.

CHAPTER 9

AIR/LAND OPERATIONS TRAINING

SECTION 1

INTRODUCTION

"Train the hawk carefully on the fist and he will fly uncommonly well."

Harting

GENERAL

1. Operational training must include the application of tactical air/aviation support to the land battle. There are considerations particular to the training and employment of tactical air, and it is important that these considerations are fully appreciated by all commanders and their staffs.
2. To optimize the effective employment of tactical air and aviation in battle and in training, all officers must understand the principles of tactical air operations. They also must appreciate the organizations and capabilities involved and be aware of relevant request and control procedures. Details of operational concepts and tactical procedures are contained in B-GA-440-000/FP-000, Tactical Aviation in Operations.

SECTION 2

TACTICAL AIR OPERATIONS

TACTICAL AIR

1. In the Canadian context, where all air resources belong to a single command, the various functions of tactical air are grouped under three types of operations:

- a. **Tactical Air Operations.** These are air operations involving the employment of air power in the air/land battle to:
 - (1) gain and maintain air superiority, or at least establish a favourable air situation (counter-air);
 - (2) prevent movement of enemy forces into and within the objective area and seek out and destroy enemy forces and supporting installations (air interdiction);
 - (3) join with ground or naval forces in operations within the objective area, in order to assist directly in the attainment of their immediate objectives (close air support and air reconnaissance).
- b. **Tactical Air Transport Operations.** These are defined as the carriage of passengers and cargo within a theatre by means of:
 - (1) airborne operations which involve the movement of combat forces and their logistic support into an objective area by means of:
 - (a) parachute assault,
 - (b) helicopter borne assault, or
 - (c) air landing of troops into a secure area.
 - (2) logistic airlift;
 - (3) special missions; or
 - (4) aeromedical evacuation missions.
- c. **Tactical Aviation Operations.** These involve the employment of aviation units, primarily helicopters, assigned to the operational and administrative control of land formations. The units are tasked by the formation commander, and provide:
 - (1) close reconnaissance;

- (2) liaison, radio relay, and utility operations;
- (3) direction of artillery fire and strikes by close support aircraft and attack helicopters; and
- (4) tactical and logistical airlift of troops and material.

CONCEPT OF TACTICAL AIR OPERATIONS

2. The primary task of friendly air forces is to gain air superiority, or a favourable air situation, and prevent enemy air forces from interfering with the progress of land operations. Until this is achieved, our own concentration, supply and manoeuvre will be harassed and hampered. Against a background of air superiority in WW II and subsequent conflicts, the need for strong air defences, anti-aircraft drills, dispersion, concealment and general air alertness has often been neglected in training and during exercises. The vital importance of these aspects must be impressed on all ranks during training and in actual operations.

3. Counter air operations are conducted to attain and maintain a desired degree of air superiority. Since friendly air and ground operations will be significantly impaired in the face of effective air opposition, the outcome of counter air operations has a direct influence on all other activities.

4. The objective of air interdiction is to destroy, neutralize or delay the enemy's military potential. The interdiction battle is fought forward of the fire support co-ordination line (FSCL). The detailed integration of each air mission with the fire and movement of the land forces on the ground is therefore not required.

5. Close air support operations are directed against hostile targets in such close proximity to friendly forces that detailed integration of each mission with the fire and movement of the ground forces is required. These missions will be on the friendly side of the FSCL and will be under the control of either an airborne or ground based forward air controller (FAC). Close air support exploits the mobility and fire power of the aircraft to support the ground forces in the following ways:

- a. breaking up enemy armoured thrusts;
- b. providing flank cover during deployment of friendly forces;
- c. assisting friendly forces when disengaging or redeploying; and
- d. conducting supporting attacks.

6. Close air support makes an immediate contribution to the land battle, and thus must always be considered when fire plans are being prepared. To achieve success, targets must be promptly identified and clearly marked by the ground troops who must be well trained in

appropriate techniques. It should be noted that close air support sorties will not normally be available until the successful completion of the counter-air programme. In addition, the support available may be restricted by bad weather or darkness. Normally, close air support should not be employed against targets which are suitable for attack by, and within range of, weapons organic to ground forces. Exceptionally, close air support may be directed against such targets when the urgency of the situation demands support from all available weapons, eg the Battle of the Golan Heights in the 1973 Arab/Israeli war.

7. Successful conduct of operations depends to a great degree on the tactical commander being provided with accurate intelligence. Air reconnaissance provided by fighter aircraft, helicopters, drones and other sensors can provide information by visual, photographic, electronic or infrared means. Intelligence gained through air operations is only useful if it is accurately reported, properly interpreted and rapidly disseminated. It is a responsibility shared by staffs at all levels to ensure that requests and results of air reconnaissance missions are properly processed. This is accomplished by effective liaison and co-ordination of the intelligence, aviation and operational units concerned.

8. When considering the requirements for air support it is essential to appreciate the capabilities and limitations of the air element generally, and the various weapons and armaments available to the tactical air forces in particular. It is important therefore that close liaison in training between land and air forces occurs.

COMMAND AND CONTROL

9. The successful employment of tactical air resources in support of the land battle is based on centralization of control at the appropriate level of command. This centralization is essential for an effective response by tactical air forces to the requirements of the land formation commander. The actual level of command is dictated by the size, organization and role of the formation and the command structure under which it is operating.

10. The operational command and control of tactical air and air transport resources is the responsibility of the commander of the tactical air formation assigned to support the particular land force formation.

11. The operational and administrative control of tactical aviation resources is delegated to the commander of the appropriate land formation and is executed through the commanding officers of the tactical aviation units assigned to that formation.

12. All land formation commanders will be provided with air staff officers of appropriate rank and experience to provide aviation advice on the employment and tasking of allocated air resources. As members of the formation HQ, these air staff officers will also be responsible for the co-ordination of air support training within the formation.

13. The tasking and control of tactical air and air transport support, and the necessary airspace co-ordination, is accomplished through a system of communications and control units and a central planning agency. This system, known as the tactical air control system (TACS), is a subordinate element of the tactical air formation.

14. The TACS consists of control units and communications facilities co-located with land formation HQ to request, task and control tactical air support. The components of the system are:

- a. **Tactical Air Control Centre (TACC).** The principal air operations installation (land or ship based) from which all aircraft and air warning functions of tactical air operations are controlled.
- b. **Airlift Control Centre (ALCC).** The subordinate element of the TACS responsible for the control and co-ordination of all tactical air transport operations.
- c. **Tactical Air Control Party (TAC).** A subordinate operational component of a TACS designed to provide air liaison to land forces for the control of aircraft. Co-located with the artillery tactical HQ to form a fire support co-ordination centre (FSCC) at divisional and brigade HQ, the TACP can provide a FAC if required.
- d. **Fire Support Co-ordination Centre (FSCC).** A single, all arms organization in which are centralized the communications facilities and personnel required to co-ordinate all forms of fire support.
- e. **Forward Air Controller (FAC).** A specially trained officer who, from a forward position, directs close air support missions. FAC parties may be provided by artillery FOOs, helicopter pilots or TACP officers.

15. The TACP is an airspace co-ordination agency and a controlling unit for tactical and air transport resources in support of the land formation. It is attached to a formation for operations or exercises and performs as an integral part of the FSCC. The TACP is not responsible for the tasking of the brigade's helicopter resources. The allocation of helicopter resources, and priorities for their use, is the prerogative of the army formation commander.

CO-ORDINATION OF AIR SUPPORT TRAINING

16. The co-ordination of air activities within a formation, and the request and tasking for tactical air support, is the responsibility of the air staff officer at formation HQ. As noted earlier, this officer acts as an air advisor to the commander and the staff on the employment of tactical air support, and co-ordinates the operation of the TACP. His staff functions include:

- a. providing advice on tactical air support and necessary input for operational and logistics planning;

- b. integration of the TACP into the formation HQ and the coordination of tactical air and air transport support requests with the TACP;
- c. briefing the commander and staff on the air situation and on the allocation of tactical air resources;
- d. co-ordination of logistical support to tactical aviation units; and
- e. co-ordination of tactical aviation aspects of formation training.

SECTION 3

TRAINING FOR TACTICAL AIR OPERATIONS

GENERAL

1. If full value is to be gained from tactical air support, it is essential that all units and formations that require air support are aware of their responsibilities for joint air/land training.
2. The training responsibilities for employment of tactical air support include:
 - a. training and currency of FACs;
 - b. knowledge of request and tasking procedures;
 - c. familiarity with the capabilities and response times of tactical aircraft, and the types and effects of weapons available; and
 - d. air request communications training and the integration of the TACP into the formation's operations.
3. A favourable air situation should not be assumed during exercises. Commanders must emphasize the need to operate without air support when aircraft are heavily committed elsewhere in the air/land battle. Conversely, commanders must also ensure that their troops know how to use reconnaissance and close air support when it is available. The best ways of achieving the desired standard are by:
 - a. co-ordination of an effective training programme through the air staff officer;
 - b. demonstrations and discussions, both indoors and out, on the method of calling for close air support;
 - c. FAC and ground liaison officers' courses;
 - d. weapons' effects demonstrations;
 - e. requesting close air support for field exercises and employing it as friend and foe on all exercises with troops when it is available; and
 - f. lectures by tactical fighter pilots.

SECTION 4

TACTICAL AVIATION OPERATIONS

GENERAL

1. Subordinate land formations may be assigned helicopter resources as an integral grouping to accomplish the immediate requirements of observation, liaison, reconnaissance and logistics and utility support.
2. The extent of the administrative responsibilities for the provision of fuel and maintenance support for tactical aviation must be clearly stated. The specialist and technical control remains with the tactical air formation commander.
3. The commanding officer of a helicopter squadron assigned to a formation acts as an adviser on the employment of tactical aviation resources. The land formation commander assigns priorities and may place aircraft in support of units who then liaise directly with the helicopter squadron.

TRAINING METHODS AND RESPONSIBILITIES

4. The commanding officer of the aviation unit is ultimately responsible for the direction, organization and supervision of training. The overall responsibility for direction and control of training is as follows:
 - a. The tactical aviation commander at formation HQ is responsible for the direction, supervision and assessment of aircrew standards, and the application of techniques and tactical training within the helicopter unit.
 - b. The army formation commander is responsible for collective and formation training to develop procedures and tactics in support of all arms and units of the formation.
5. The training plan for the squadron is produced in accordance with the appropriate training plans and instructions issued by its air formation HQ. This plan must allocate time and resources to achieve the required individual and collective training standards. The co-ordination of training in a tactical aviation unit is particularly complex since the daily requirements for tactical aviation support to the land formation must be integrated with the training aims of the squadron. The specific aims of each phase and the time allotted must be followed or the results will be a reduction in efficiency and the effective use of resources.

6. **Collective Training.** The confirmation of tactical skills can be made during short collective training periods, or on exercises with the combat arms. This training can take the form of lectures or field deployments. The aim and purpose of each phase must be defined and a summary made on completion. Assessment and supervision is sometimes difficult during tactical aviation exercises, however, every attempt should be made to allow pilots and the officers of supported units to learn the correct control and employment procedures.

7. To ensure effective cooperation, individual officers of the tactical aviation squadron should be given specific responsibilities for liaison with the appropriate supported units concerning specialist skills. These liaison officers can assist in the co-ordination of unit training plans and the development of mutually beneficial collective training exercises.

8. **Formation Training.** The primary mission of the tactical aviation squadron is support of other units. Therefore, the formation exercise is a true test of the ability of the squadron to accomplish its missions.

9. The squadron must have completed its own collective training prior to formation exercises. The exposure of unit deficiencies in function or procedure during a formation exercise can result in false conclusions being drawn in the application of aviation support, and a lack of confidence in this support on the part of user units. After an exercise, the lessons learned must be properly noted and the cause and responsibility for any problems encountered clearly defined to allow corrective action to be taken.

10. The army formation and unit commanders and their staffs must be fully aware of helicopter employment considerations. The responsibility for providing personnel with the required information lies primarily with the helicopter squadron commander. Affiliation in collective training and constant indoctrination will assist in achieving the desired level of knowledge.

11. Units must be aware of their responsibilities for:

- a. general aircraft safety;
- b. air request procedures;
- c. communications and tasking procedures;
- d. selection of landing zones;
- e. loading and transporting of troops;
- f. preparation of slung loads; and
- g. casualty evacuation.

12. The required training can be accomplished by:

- a. including helicopter tactics and tasking procedures in officer and NCO training;
- b. training key NCOs and specialist teams of specific units in loading procedures, preparation of slung loads, and medical evacuation techniques; and
- c. conducting short familiarization courses for specialist officers and NCOs in the employment, navigation and observation skills required when using helicopters in a reconnaissance or liaison role.

BALANCE BETWEEN TECHNICAL AND TACTICAL TRAINING

13. Tactical helicopters exist primarily to support land forces in operations, and all training must be carried out with this end in view. There is a delicate balance between the need to concentrate on technical flying proficiency and the need to devote a high portion of flying time to the perfection of operational techniques and tactics. It is this fine balance between technical and tactical aspects which must be addressed in training to ensure the effectiveness of the air/ground team in battle. There is great merit in ensuring that tests of pilots' flying efficiency are matched equally with tests of their operational capability.

THE REQUIREMENT FOR TACTICAL GROUND TRAINING FOR PILOTS

14. Of all those who operate on the battlefield, the helicopter pilot is the individual most likely to find himself rapidly transposed from one tactical setting to another and being called upon to support a series of different commanders in varying situations. Pilots therefore require an extensive knowledge not only of how the combat arms are organized, but also how they operate. When on support missions, such as reconnaissance or the control of artillery, the pilot is acting as an airborne extension of the unit he is supporting. He must see the battlefield through the eyes of that unit, and think and interpret what he sees from the point of view of the ground forces. This calls for a wide military knowledge and all arms training which can be accomplished by individual study, attendance at all arms study periods, joining unit exercises in the ground role, and supporting the combat units on field exercises, particularly when live firing is conducted.

15. All personnel assigned to a helicopter squadron must have undergone ground training so that they can protect themselves when the squadron is deployed under operational conditions. The need for versatility amongst ground crews is of great importance. Even though technical proficiency is at a premium, squadron ground crews must be prepared to protect the helicopter hides and operate without outside assistance. This is a difficult task, however the operational capability of the squadron depends on it.

BATTLE ENVIRONMENT TRAINING

16. In war, the fortunate soldier has the opportunity of correcting the shortcomings of this peacetime training. For example, the experience of an artillery burst or bullets snapping past him will rapidly bring home the lessons of poor camouflage and concealment. On the other hand, the helicopter pilot is not likely to have this opportunity, as he will probably be unaware of the near miss. If he has not learned the dangers of tactical indiscretion in peace, he may well be denied a second opportunity to do so in war.

COOPERATION

17. Tactical aviation is a vital member of the air/land team. In operations, the helicopter becomes an intimate partner. The cooperation and confidence which is built up among the members of the team can only come through a mutual understanding of each other's characteristics and problems gained by constantly training together.

18. The combat arms are in a position to assist in the training of helicopter squadron personnel on basic military skills. This can be accomplished through lectures, demonstrations, TEWTs and joint discussions on field training. Time must be set aside within the annual training cycle to ensure that this training takes place. In this way not only does the pilot learn to carry out the particular supporting role, but he can anticipate what the supported unit is doing on the ground.

SECTION 5

TACTICAL AIR TRANSPORT OPERATIONS

SPECIAL REQUIREMENTS FOR AIRBORNE AND AIR TRANSPORTED OPERATIONS

1. Tactical air transport operations are defined in Section 2, 1b.
2. There are three main requirements when a formation is to be transported by air. These are:
 - a. Troops must be trained as airborne or in airmobile techniques.
 - b. Unit equipment must be restricted to that which is air portable and the provision of special equipment should be kept to a minimum.
 - c. In addition to staff duties and discipline, a sound capability of loading, lashing and unloading of equipment in the shortest possible time is required. Dismantling or reassembly of equipment may also be necessary.
3. Selected officers and senior NCOs from all units, particularly from the service battalions, should be trained in the layout and operation of drop zones, forward airfields and landing strips.

TRAINING OF LAND FORCE COMMANDERS AND STAFF OFFICERS

4. Commanders and staffs must understand the characteristics, uses and limitations of air transport, be conversant with current request and control procedures and be trained to deal with the particular requirements of this type of operation. Training should therefore cover the following areas:
 - a. a thorough knowledge of capabilities and limitations of the transport aircraft;
 - b. the factors affecting the sequence of planning for air moves;
 - c. the base and forward airfield organization;
 - d. the preparation of air tables including air movement tables, aircraft loading tables and flight manifests;
 - e. the method of demanding air supply and maintenance;
 - f. the selection and marking of drop zones and the limitations of these methods; and
 - g. the preparation of unit staff tables.

5. All ranks must understand the problems of movement by air and both individual and collective training in this subject is essential.

INDIVIDUAL TRAINING FOR AIRBORNE AND AIR TRANSPORTED TROOPS

6. The aim of individual training is to teach unit officers and non-commissioned members (NCMs):

- a. to attain a high standard of parachute jumping (airborne troops only);
- b. to attain a high proficiency in emplaning and deplaning;
- c. to acquire the correct method of breaking down, stowing and lashing equipment and stores in aircraft;
- d. to understand the necessity of the correct distribution of weight in aircraft;
- e. to avoid damage to aircraft;
- f. to practise the relevant aircraft drills; and
- g. to acquaint all ranks with airfield discipline.

COLLECTIVE TRAINING FOR AIRBORNE AND AIR TRANSPORTED TROOPS

7. The aim of collective training is to combine the lessons learned during individual and staff training in order that operations by air can be carried out efficiently.

8. Collective training should include study periods, ground rehearsals and exercises using transport aircraft. The following points should be covered:

- a. briefings,
- b. staff duties and documentation,
- c. concentration of troops,
- d. marshalling drills,
- e. loading and emplaning,
- f. flying SON,
- g. deplaning and deployment, and
- h. supply and maintenance.

9. **Briefing.** Commanders and junior leaders must be trained in the correct use of briefing material. They must know how to read air photographs, use models, and recognize the mounting airstrip, the layout of the drop zones, the forward landing areas and the surrounding features.
10. **Staff Duties and Documentation.** Units should have air loading tables prepared to enable an accurate and quick breakdown of personnel and equipment when the aircraft allotment is known. Staff officers at all levels should be thoroughly familiar with the use of the air movement tables, aircraft loading tables and flight manifests. Units which have an airborne or air transported role should ensure that there is continuous liaison between the unit and the air movement staff at the airfield, and that SOPs are established to resolve any problems which arise.
11. **Concentration and Marshalling.** Formations and units must be trained to deal with administrative security and traffic control problems. All officers and senior NCOs should be aware of the functions and duties of the air transport liaison officer on the mounting airfields.
12. **Loading and Emplaning.** Unit emplaning officers should ensure that unit loading teams are assigned tasks to ensure loading in the time allotted. Stores such as lashing gear, ramps, etc, should be checked. Constant supervision is essential to avoid damage to aircraft.
13. **Air SOPs.** Most airborne troops have considerable experience with air SOPs. However, whenever possible, troops likely to be involved in air operations should be given refresher training on air SOPs.
14. **Deplaning and Deployment.** Staffs must ensure that the troops deploy at the drop zone or airfield in the correct tactical grouping.
15. **Supply and Maintenance.** Units must ensure that arrangements are made for the collection and distribution of stores and supplies carried in the initial move. When the force is maintained only by air, a special air supply organization will be established.
16. **Unit Emplaning and Deplaning Officers.** It is essential that these officers have a complete knowledge of all details of individual training concerning their duties in their particular unit and in addition, they must be aware of the problems inherent with the movement of a unit.
17. **Training of Troops.** Because of the condition under which air transported operations may take place, and the smaller scale of vehicles that can be carried, particular attention must be paid to the physical fitness of the troops. Considerable physical effort may be necessary following long flights. Troops should be trained to cover long distances carrying heavy loads and be fit for combat on arrival. They must endure damp and cold weather without much protection and know how to economize on the use of rations and water. Consideration must also be given to the problem of adaptation to a rapid change in climate, eg, the strategic lift from Canada to Cyprus, where the problem of acclimatization is exacerbated by a long flight.

18. **Training Stores.** Training stores such as lashing gear, load spreaders, ramps, etc, will be required. These equipments will inevitably be in short supply and maximum use should be made of them when they are available. In addition, the use of mock-ups such as fuselages, etc, is useful for training, and can be simulated by marking out the actual dimensions of the fuselage floor space of the aircraft on the parade square. Positions of door and strong points should be clearly shown.

19. **Films and Videos.** Films and videos of airborne operations, the dropping of heavy lift stores and the loading and unloading of large pieces of equipment in aircraft are also valuable means of instruction.

SECTION 6

AIR DEFENCE TRAINING

UNIT AND COMMON ASPECTS

1. Due to the increased awareness of the air threat to manoeuvre forces, air defence training is assuming greater importance. Air defence artillery is now integral to land formations.

2. Although the main air defence of any theatre above low level is based on fighter aircraft and ground-to-air guided missiles, the local protection of troops on the ground will be improved by camouflage, concealment, dispersion, tactical movement by night, and through the use of highly trained air defence teams of both missiles and guns at unit and formation levels. Although our forces may gain air superiority in battle, it will never be possible for them to prevent some enemy fighters and attack helicopters from infiltrating the defensive system to carry out attacks. Training in the following subjects is therefore essential:

- a. **Offensive Action.** Unit commanders must insist on a high standard of alertness so that unit air defence teams are ready at a moment's notice to engage hostile aircraft. This requires a high standard of training in engagement techniques and aircraft recognition.
- b. **Dispersion.** Dispersion, particularly in the rear areas, is becoming more necessary. Supplies must come forward in small convoys and full use must be made of helicopters. Considerable administrative problems result from this type of dispersion and training must be geared to solving them.
- c. **Concealment.** Camouflage and concealment must continue to be stressed during field training. The employment of photographic reconnaissance aircraft during training exercises will help expose any carelessness. The introduction of imagery sensors which can be used by day or night, the use of infra-red and side-looking airborne radar and electronic reconnaissance, make concealment more difficult. Notwithstanding the fact that given time, an analysis of air photographs etc will reveal even the most carefully camouflaged position, that time is seldom available to the enemy. Normally an interpreter will scan his imagery to find the more obvious locations due to poor camouflage and concealment. Furthermore, the chances of offering enemy aircraft targets of opportunity will be much reduced if good concealment is continually practised.
- d. **Movement by Night.** It is possible that due to the air threat, the majority of replenishment and tactical moves will have to be carried out at night. We must, therefore, train to fight and move on a twenty-four hour basis.

- e. **Cross-Country Movement.** Even though air superiority may be achieved, road movement by day will always be dangerous. Training in cross-country movement, where vehicles can take cover and use alternative cross-country routes, should be conducted. Situations involving the movement of supplies by such routes must be considered in administrative exercises.

- f. **Enemy Airborne.** A further aspect of hostile air action against which countermeasures are required is the threat of enemy airborne operations, including the dropping of long range patrols and guerilla forces at night. Immediate action must be taken against these troops while they are still disorganized. Therefore, a small reserve must be held in readiness for this particular purpose. Air defence teams must be trained not only to look for aircraft but to observe for small ground parties in their areas.

3. By the nature of their tasks, the formation air defence detachments will often be scattered over a considerable area within the formation area and are vulnerable to ground attack. It is important that these troops are able to defend themselves. This entails a high standard of fundamental training in the use of ground, weapons, and good camouflage, concealment and movement.

4. Unit commanders must practice small arms air defence drills during field exercises, ensure that all ranks understand the SOPs for air defence and put them into effect when they receive early warning or during actual air attacks.

CHAPTER 10

SPECIAL ASPECTS OF TRAINING

SECTION 1

INTRODUCTION

GENERAL

1. This chapter discusses some special aspects of training which must receive attention during the training cycle. Subjects covered are:

- a. the NBC environment;
- b. night operations;
- c. the use of smoke;
- d. battlefield models;
- e. training of replacements;
- f. simulation; and
- g. training in combat survival.

SECTION 2

TRAINING FOR THE NBC ENVIRONMENT

GENERAL

1. Of all the factors in nuclear, chemical and biological operations, their effect on the morale of the individual soldier is perhaps the most difficult to assess and simulate. Commanders at all levels must train their soldiers so that the physical effects of these weapons are clearly understood. Equally, troops must understand that the protective measures and drills which have been developed provide a good chance of survival if properly used.
2. Information concerning nuclear, biological and chemical effects, defence and procedures is found in the B-GS-316 series, Nuclear, Biological and Chemical Defence. An awareness of the capabilities of NBC weapons and the need for sound defensive training against them will reduce their effects in battle.

TRAINING FOR NUCLEAR WARFARE

3. Operations in a nuclear environment will require that particular aspects of conventional training be emphasized or modified to some extent. These are summarized briefly in the following paragraphs.
4. **Digging.** The need to dig to gain protection is of vital importance. If they are to survive, soldiers must be trained to construct battle trenches as quickly as possible and to live in them. Limitations of time, ground and the materials available must be considered. A commander's digging policy and insistence that it be carried out at all times may be one of the most influential factors in reducing casualties.
5. **Living Below Ground or Closed Down.** Troops and HQ staffs must be trained to remain protected in battle shelters or in armoured fighting vehicles for extended periods. This creates administrative problems which can only be solved with practice. It must be stressed that the preparation and practice of simple but comprehensive SOPs to counter the effects of nuclear strikes will help to minimize casualties.
6. **Dispersion.** Despite the requirement for concentration to defeat the enemy, dispersion between units must be the normal practise. Brief concentrations at the critical point and time must be followed quickly by dispersion to ensure that lucrative nuclear targets are not created.
7. **Movements.** Protection from nuclear strikes can be gained by frequent movement of units and HQ to deny the enemy the opportunity to locate and engage suitable targets. Movement from hides to battle positions, approach marches, and moves by HQ to avoid detection will almost certainly have to be carried out at night. These must be practiced constantly.

8. **Mobility and Speed.** In a nuclear environment, and because it will be dangerous to deny ground to the enemy by its permanent occupation, a force must create offensive opportunities by its tactical mobility. Opportunities will be fleeting and reactions must be swift. All arms groupings must therefore be practiced thoroughly and continuously in tactical training and units must learn to move with very little warning and preparation. The mounting of quick operations must be practised on exercises, especially at night.
9. **Surveillance.** The tactical concept of dispersion on the nuclear battlefield will inevitably produce gaps over which units and formations may be unable to observe continuously. The deployment and co-ordination of surveillance devices, and vehicle and foot patrolling therefore become more important.
10. **Intelligence.** Intelligence must be directed so that information is available in time for a commander to decide where and when to engage appropriate targets. Equally, information on the deployment of potential enemy delivery means is critical. Once a strike warning is initiated, the information must be disseminated quickly to all troops so that the appropriate protective measures can be taken.
11. **Concealment and Deception.** While acquiring information about the enemy, troops must themselves remain unseen from both the ground and the air. Physical concealment and deception must be practised at all times. These are individual responsibilities. Soldiers should not be allowed to forget the lessons they learned during basic and individual training.
12. **Electronic Warfare.** Electronic warfare may be used to cripple primary means of command and control, thus impairing the use of the nuclear weapon. The location of HQ and units can be revealed through enemy intercept of emissions of electronic equipments. Electronic concealment and deception are just as important as physical concealment and deception. Radio users must achieve a high standard of security and be subjected to jamming and direction-finding in training to enable them to practise the counter-measures. Annex P discusses EW training.
13. **Alternative Command.** There is a very real danger that a HQ anywhere in the combat zone may be destroyed by a nuclear strike. If the system of command and control is to be flexible, and is to continue to function in such circumstances, the exercise of alternative command must be constantly practised.
14. **Post Nuclear Strike Information.** Units and formations must be trained to carry out their tasks of nuclear strike reporting and intelligence gathering. The functions, procedures and communications of OPs, patrols, air reconnaissance and sensors must be practised.
15. **Nuclear Radiation.** Immediate and residual radiation will affect both personal and operational plans. Training must include practice in the use of instruments to detect radiation and the passing of information for collation. The restrictions imposed by residual radiation must be recognized and realistically considered by those being exercised.

16. **Combat Survival.** Individuals may find themselves isolated or cut off on a nuclear battlefield. It will be their duty to rejoin their unit as soon as possible, and they need training in combat survival techniques to enable them to do this effectively.

17. **The Enemy.** Training according to approved tactical concepts must not obscure the need to study and understand a potential enemy's tactical doctrine. Although in conventional war commanders rely primarily on their intelligence staffs for a knowledge of enemy tactics and organization, in the nuclear environment, all ranks must be trained to recognize changes in enemy battlefield habits, tactics and dispositions which might indicate the imminent employment of a nuclear weapon. Any change from the norm should be reported immediately.

18. **Logistics.** The disruption of rear areas by nuclear strikes and the restriction of movement will place additional burdens on service units. SOPs should be in place and practised to minimize the disruption.

19. **All-Arms Training.** While combat arms units will organize their own individual and unit training at the beginning of the training cycle, there will come a time when they must be trained to cooperate and form efficient battle groups. Commanders will rely on such groupings to observe, contain and later attack the enemy in support of a friendly nuclear strike or counter-attack. Such training must aim to exploit the characteristic advantages of each combat arm while operating as part of an all-arms team.

CHEMICAL AND BIOLOGICAL TRAINING

20. Chemical and biological weapons will have their greatest effect if they are used in a surprise attack. The extensive use of protective clothing and equipment, with the resultant fatigue, will slow the pace of all personnel. As well, the need to decontaminate vehicles and equipment and negotiate contaminated ground, will reduce the mobility of mechanized forces.

21. Chemical and biological defence must be stressed in training and troops must be practised in the wearing of protective clothing and the operation of vehicles and equipment under these conditions for long periods of time.

22. Training standards can be maintained and defensive measures stressed in the field by:

- a. wearing of protective masks, clothing and equipment over long periods during conventional exercises;
- b. practising troops in the decontamination of personnel and vehicles;
- c. detecting and reporting simulated BCW agents on exercises;
- d. practising alarm systems and the use of BCW sentries;
- e. exercising the handling and evacuation of mass casualties at the unit and brigade level; and

- f. discussing and practising the problems of regrouping and replacement after mass casualties, through cloth model exercises, TEWTs and field exercises.

23. Commanders and staffs must remember that BCW agents affect all levels. Therefore, they must also be practised in individual protective measures. All members of the formation or unit must be able to wear a mask for at least six hours at a time and to carry on their normal duties while masked.

SUMMARY

24. Commanders must stress the influence NBC weapons will have on tactics. Their troops should understand the type and degree of change or adjustment which must be made in tactics for NBC conditions. To learn this, troops must practise together in the field under simulated NBC threat.

SECTION 3

TRAINING FOR NIGHT OPERATIONS

INTRODUCTION

1. Historically, the conduct of operations at night, particularly offensive operations, has presented great problems for both commanders and individual soldiers. The facts that darkness provided natural concealment and increased the potential for surprise were always counterbalanced by the immense difficulties in command and control. Deliberate attacks called for elaborate rehearsals, extensive reconnaissance, ponderous movement and tight control.
2. Doctrinal development and training for night operations has always been geared to overcoming the problems of personnel not being able to see where they were going or identifying what targets they were to engage. Battlefield illumination, radars, navigational aids, an increased reliance on radio communications for control at lower levels and a host of ingenious techniques were developed in an effort to overcome the problem of the individual's "blindness".
3. The development of infra-red (IR) devices was considered to be a major technological breakthrough but it quickly lost its impact because it was an active device which could be easily countered.

CAPABILITIES AND IMPACT OF CURRENT NIGHT VISION DEVICES

4. Modern, compact image intensification (II) devices and thermal imagers are now available to every nation with a standing army. Following are a number of miscellaneous points which should make the impact of these devices on night operations clear:
 - a. movement by night will only be marginally slower than by day;
 - b. target detection ranges approximate daylight ranges;
 - c. hit probability of detected targets will be as high as by day;
 - d. any active light source, even cigarettes or internal vehicle lights, can be easily detected out to 2000 meters; ,
 - e. the effectiveness of II sights can be enhanced by illumination;
 - f. II and thermal viewer capabilities can be reduced by the employment of special smoke;
 - g. effective camouflage will reduce the effectiveness of II devices; and
 - h. the use of radio for command and control will be much reduced compared to night operations conducted without night vision devices.

HOW TO TRAIN FOR THE NEW ENVIRONMENT

5. Clearly, in training for future night operations the impact of night vision devices must be considered. On the other hand, these devices do not turn night into day, so it is obvious that many of the lessons of the past will continue to apply. The problem for the trainer today is the establishment of the correct balance. Following are a number of points which dictate that the soldier must continue to be trained to function effectively at night without the benefit of II devices:

- a. It is doubtful that all individuals in combat arms units will be issued with individual night vision devices.
- b. The devices will only give aided vision over a limited arc and will not turn night into day.
- c. In the event of the devices breaking down, the individual will have to rely on his normal unaided vision skills.
- d. Countermeasures to night vision devices, notably smoke, have been developed, and it is quite probable that technology to defeat, or at least reduce the effectiveness of thermal imagery will be developed.

6. It should be apparent that it would be dangerous to dispense with those aspects of training for night operations which will allow soldiers to fight effectively should devices not be available or lose their effectiveness. The question might be asked: "How long would it take to recover the basic expertise of fighting at night if we ceased such training now and effective countermeasures were developed to defeat II or thermal imagery?"

7. The problem is clear. Commanders must provide for the training of their soldiers in the use of night vision devices as they are issued, while at the same time ensuring that current skills of operating at night are retained. Similarly, tactical doctrine must be adapted to cover the complete range of possibilities, ie few or no night vision devices to full distribution of these devices to our own troops and also to the enemy.

POINTS TO BE COVERED IN TRAINING

8. The following paragraphs outline important aspects which must be covered in training.
9. **Individual Training.** Individual training should include:
 - a. characteristics, operation and deployment of surveillance and night vision devices;
 - b. navigation at night with and without the advantage of navigation or night vision devices;

- c. light and noise discipline SOPs;
- d. identification friend or foe, with and without night vision devices;
- e. methods for command and control at platoon and section level with and without night vision devices; and
- f. patrolling, sentry duties and challenging.

10. **Collective Training.** TEWTs, study groups and practice in the field are required on the following subjects:

- a. control and co-ordination of the employment of the following:
 - (1) white light,
 - (2) IR equipment,
 - (3) II sights and vision aids,
 - (4) thermal devices if employed,
 - (5) radar, and
 - (6) ground sensors;
- b. active and passive navigational aids for the manoeuvre of units;
- c. rehearsals and daylight reconnaissance;
- d. conduct of first line equipment repairs and resupply at night in the II environment;
- e. identification of friendly troops and vehicles;
- f. protection against enemy night vision equipments;
- g. all arms cooperation including battle formations, communications, co-ordination of movement, etc at night;
- h. achieving surprise using deception in an II environment;
- j. the employment of smoke (including multi-spectral if available) to reduce the effectiveness of enemy night vision devices;
- k. knowledge of enemy tactics at night; and

- m. control of artillery fire at night.

SUMMARY

11. The policy of training for the worst case is particularly applicable to night operations. As II equipments enter our inventory, the tendency may be to put aside the lessons of fighting at night without the benefit of night vision devices. Commanders must guard against this and ensure that an effective balance between the two extremes is established.

SECTION 4

TRAINING TO USE SMOKE

INTRODUCTION

1. Because of the significant improvement in the range, firepower and accuracy of weapons, in the mobility of ground and air equipment and in battlefield surveillance capabilities, screening with smoke can play an even more important role in safeguarding the combat operations of troops. Smoke makes observation, aimed fire and control within units or formations difficult and reduces the effectiveness of IR, low-light television, lasers, II devices and, depending on the type of smoke, other thermal imagers. Smoke remains the only fast and flexible means of concealment at the immediate disposal of a commander. As such, it can be considered as a tactical reserve that can be employed quickly during the conduct of the battle, especially should the situation become desperate and heavy casualties are being taken.

2. The use of offensive and defensive smoke must be given greater emphasis in training. This can be accomplished initially through study groups and TEWTs, however, at some point in the training cycle it must be practised in the field on exercises. Troops must be exposed to the effects of smoke on their operations and commanders and staffs must be trained in the control of its use and the tactical and administrative planning required to ensure that resources are available to ensure its effective employment.

STUDY PERIODS AND DISCUSSIONS

3. The following subjects can be covered in study periods, discussions and, to some degree, on TEWTs:
- a. the technical characteristics, means of employment and smoke resources available to both friendly and enemy troops;
 - b. the various smoke loads which must be available to produce desired effects;
 - c. formation policy on the employment of smoke;
 - d. the potential for the use of smoke in all types of operations by day and night;
 - e. tactical countermeasures when operating in dense smoke;
 - f. battle drills and methods of employing smoke through the co-operation of all arms;
 - g. smoke as a signalling device to -
 - (1) indicate targets and objectives;

- (2) identify friendly positions;
- (3) order changes in fire plans; and
- (4) initiate planned actions;
- h. smoke as a means of deception; and
- j. the correct ratio of HE and smoke for effective neutralization of a position.

SMOKE IN FIELD EXERCISES

4. Once the theoretical aspects of the employment of smoke have been covered in exercises without troops, troops must be practised in operating in the smoke environment. As smoke resources will usually only be available on limited scales for training, the resources are probably best used en masse on a particular phase of an exercise to ensure that the effects are obvious to all participants. This is a far more effective method than producing limited smoke over a longer exercise period, with reduced or minimal impact.

5. At some point in an exercise then, all types of smoke must be issued and employed. Due to safety aspects, control on delivery means may have to be strict, but through the use of a neutral organization, dense screens can be provided by generators. The following should be considered:

- a. Tanks must be forced into situations which will force the use of smoke dischargers.
- b. Tanks and artillery must practise hand-off techniques in building smoke screens. Generally because of their limited smoke ammunition load, tanks commence an opportunity screen and the artillery maintains the screen at desired levels.
- c. Infantry must be practised in attacking through dense smoke screens. These can be produced by the extensive use of smoke generators.
- d. Operators of guided weapons must be practised in tracking and engaging targets partially screened by smoke.
- e. Smoke should be available for commanders to either cover an obstacle crossing operation or for deception plans.

SUMMARY

6. The employment of defensive and offensive smoke and the use of smoke for deception is growing in importance. A major research and development effort in the following areas by both Allied and other nations makes this clear:

- a. improved AFV smoke discharger systems;

- b. screening rounds for winter conditions;
- c. non-toxic screening munitions for training;
- d. use of smoke in the urban environment;
- e. doctrine and training;
- f. countermeasures to optically/wire-guided anti-tank guided missiles (ATGMs);
- g. countermeasures to laser guided munitions;
- h. countermeasures to thermal vision devices;
- j. countermeasures to airborne surveillance and attack; and
- k. smoke toxicity and its physiological effects.

Training in the smoke environment at all levels must keep abreast. with developments.

SECTION 5

TRAINING REPLACEMENTS

GENERAL

1. After units have been committed to operations, there is always a requirement for refresher training when they have come out of the line. The reasons for this are:
 - a. Generally, a large number of replacements are committed directly into battle before the unit commander has had an opportunity to train them as a team.
 - b. As new equipments are introduced, troops must be taught to employ them effectively.
 - c. New tactics and techniques which are often learned through bitter experience in battle must be emphasized on a continuous basis.
2. Replacements are trained as they move from main replacement depots to replacement units and battle schools. There must be an opportunity to ensure that they understand battle drills. If time is available they are sent for additional training to the battle school, which may be part of the brigade or division organization. Officers and NCOs who are instructors at the battle school should be experienced and of the highest calibre. Individuals who have had considerable battle experience and who may need a rest from the forward area are the type of instructors to assign to these appointments. The battle schools should be staffed by a cadre of instructors balanced by a good cross section of instructors from the units in action. This helps the new replacements, in that they have an opportunity to learn first-hand from an officer or NCO who is wearing the same regimental badge and who can instruct and counsel them on what they might expect when they join their unit.
3. Commanding officers should attempt to blend inexperience and experience as this will ensure that a common standard is achieved throughout the unit and that experience is placed where it is needed most.
4. The subjects which require refresher training after battle should be self-evident to the unit and formation commanders. Since time will always be at a premium during these periods, it is imperative that the correct training priorities are established. Annex AA is an example of training directive issued during operations by Lieutenant General G.G. Simonds, GOC of 2nd Canadian Corps on the 30th of July, 1944.

SECTION 6

SIMULATION

GENERAL

1. During peacetime, training will generally be constrained by the following factors:
 - a. manpower restrictions;
 - b. general fiscal constraints;
 - c. time;
 - d. limited experience; and
 - e. increased training requirements and costs to cater for training on sophisticated weapons and equipments.
2. Once a mobilization plan is executed the constraint of manpower restrictions will be replaced by the problem of large and immediate training loads. The total training system for peacetime must be designed on such a way that it can cope with this increased load.
3. The trainer retains the responsibility to plan and conduct training which is efficient both from performance and cost standpoints. Training simulators provide great potential in meeting these responsibilities.

CAPABILITIES

4. A training simulator is any device which permits a trainer to reproduce to some degree the actual performance, or part of the actual performance, required in a combat situation.
5. The employment of simulators should be considered under conditions where:
 - a. use of the actual equipment may be too costly;
 - b. use of the actual equipment by a new trainee may be too dangerous;
 - c. the actual equipment, or suitable ranges and training areas, is not available;
 - d. some particularly complicated sub-function of a task requires emphasis; or
 - e. there is a requirement for immediate feed-back to a student on his performance.
6. In the use of simulators the following principles must be followed:

- a. A simulator must serve a clearly defined training need. If it does not, then it only complicates the training problem.
- b. Before simulation is employed, a careful analysis of the task must be conducted to determine the nature of the learning problem and the associated requirements.
- c. From this analysis, precise objectives for the training simulator and testing standards must be defined.
- d. The training simulator is merely an aid to effective job performance and is not an end in itself. It is the task of the trainer to determine the most effective mix of time on simulators and time on the actual equipment or tasks to produce the required standard.

SCOPE

7. Simulators of exceptional scope and complexity are now available. The complexity of the simulator is a general reflection of the complexity of the task being trained. Similarly, the complexity of the simulator will be reflected in its cost.
8. The major categories of simulation which will be available are summarized below:
 - a. **Direct Fire Simulators.** Direct fire weapons can be simulated using sub-calibre devices, laser or IR projections, television or movies, and electronic displays. The complexity of simulators varies from the very simple to extremely complicated devices which can simulate recoil and concussion, and provide feedback on firer faults.
 - b. **Indirect Fire Simulators.** Current indirect fire simulators are of the sub-calibre and pneumatic type. However, IR, laser and electronic simulators are being developed which will project a fall of shot on terrain models.
 - c. **Tracker Simulators.** A variety of simulators are available to electronically simulate the flight of both anti-tank and anti-aircraft missiles.
 - d. **Fire Control Simulators.** This type of simulator permits the control of indirect fire on a terrain model. It is often used in conjunction with indirect fire simulators.
 - e. **Explosives Simulators.** A complete range of grenade, mine, demolition charge, and battle effects simulators, such as artillery burst simulators, are available.
 - f. **Engagement Simulators.** Simulators have been developed which will permit mock combat between opposing forces using a complete range of direct and indirect fire weapons, aircraft and mines to produce casualty effects. These will have a significant impact on realistic training for war.

- g. **Driver Simulators.** Driver simulators are available which practice a student driving over a model terrain. They incorporate all the characteristics of the vehicle including noise and motion. Faults to the vehicle and various road conditions can also be introduced.
- h. **Crew Interaction Simulators.** Complex simulators to practice all functions of a crew such as driving, gunnery, communications and command are being developed to practice complete crews in working as a team.
- j. **Command and Control Simulators.** Such simulators practise commanders and staffs in command and control functions of formations and units. Complexity varies from simple board games to computer simulation models.
- k. **Target Systems.** Target systems are being developed to simulate hostile acts and effects, such as effective return of fire.
- m. **Maintenance Simulators.** Any type of mechanical or electronic system can be simulated to test and train a student in fault finding.
- n. **Electronic Warfare Simulators.** Simulators are available to present radar and other electronic images and to practice students in ECM.
- p. **NBC Simulators.** The effects of NBC weapons can be simulated through a variety of non-toxic compounds.

CONCLUSION

9. There is tremendous scope for employment of training simulators in the land forces. The training developer, in his assessment of requirements for such simulators, should always project his mind forward to the impact that mobilization will have on the ability of the training system to produce adequate numbers of effectively trained soldiers.

10. Priorities for the procurement of training simulators should be based not only on cost savings in peacetime, but on time savings in the event of mobilization. Simulators for training on combat vehicles and for gunnery training of all types must be emphasized as it is quite likely that vehicles and ammunition which are available for training in peace, would be designated as operational stocks in war.

SECTION 7

TRAINING IN COMBAT SURVIVAL

AIM

1. The aim of training soldiers in combat survival is to strengthen their will to fight with determination in battle in order not to be captured, or if they are captured, to escape. It is also concerned with strengthening individual and group capabilities to resist persuasion and intimidation.

TRAINING - GENERAL

2. Although soldiers may be threatened with capture, it remains their duty to resist capture by all means at their disposal, consistent with the laws of war.

3. General military training forms a good basis for combat survival training. However, in addition to the self-evident subjects, such as escape and evasion techniques, preparation for successful combat survival also necessitates moral guidance, initiative training, physical conditioning and a knowledge of both enemy and friendly political and war aims. Training should be progressive and start at the very beginning of the soldier's career. At all stages, evasion and survival aspects of training should be emphasized over escape and prisoner of war activities.

4. The necessary training can be divided into the following subjects:

- a. development of individual and group morale, including initiative, toughness and stamina;
- b. a general knowledge of survival and evasion techniques, developing in the later stages of training to a more detailed study of the techniques applicable to specific areas of interest;
- c. a knowledge of elementary first-aid and hygiene;
- d. a knowledge of current affairs and war aims;
- e. a knowledge of the treatment to which PW is entitled under the Geneva Conventions;
- f. a knowledge of the treatment one might receive as a PW of certain nations, the methods of persuasion, intimidation and ill-treatment which may be used to break one's will-power and the best methods of withstanding such treatment;
- g. a broad knowledge of escape techniques and escape organization; and

- h. the maintenance of morale, security, hygiene, and continued opposition to the enemy if confined in a PW camp.

INDIVIDUAL AND UNIT TRAINING

5. **Development of Individual and Group Morale.** High individual and group morale is of obvious importance in all aspects of war. It is founded on pride of country, of unit, of self, and of the team spirit. It is one of the main functions of a leader to engender this feeling in every soldier under his command.

6. **Initiative Training.** Tough, imaginative training to promote initiative and self-reliance should receive emphasis. Field exercises designed to practice survival and evasion techniques can satisfy most of the requirements for initiative training.

7. **Survival and Evasion.** Specific instruction should be given in the principles of movement and living in hostile areas, possibly for long periods and over great distances in a variety of terrain and climate. The instruction should include the following:

- a. **Navigation.** The use of the stars, compass, map and major natural features such as rivers, hills, mountains, etc.
- b. **Living off the Land.** The use of natural vegetation and wild animals, reptiles, etc. The nutritional value of various natural foods in the countryside, and improvised snaring, fishing and hunting.
- c. **Shelter.** This includes the construction of simple shelters using local materials, with possible assistance from groundsheets or parachutes.

8. **Elementary First Aid and Hygiene.** Instruction is required in improvising splints, dealing with wounds without proper medical equipment and in keeping healthy when deprived of normal facilities.

9. **Current Affairs and War Aims.** As a result of the advances in mass communication a country and its Armed Forces can be more easily attacked by subversion and propaganda than was the case in the past. This danger should not be underestimated. An appreciation of the democratic way of life and a knowledge of current affairs and the true aims of the enemy or subversive organizations are the best defence that soldiers can have against such attacks.

10. **A Knowledge of the Treatment to which a PW is Entitled under the Geneva Conventions.** A knowledge of the treatment to which a PW is entitled under the Geneva Conventions is essential in case a soldier is taken prisoner. This knowledge will help him maintain his morale in the face of persuasion, intimidation and ill-treatment. It will also ensure that when enemy prisoners are taken, they are accorded treatment which complies with the Conventions. There is no change in the rule that a PW need only provide his name, rank, number, and date of birth.

11. **Knowledge of Treatment to be Expected by a PW.** General instruction should be given to all personnel outlining basic and widely used interrogation procedures such as hidden microphones, informers, etc. Soldiers should be given detailed instruction on, or a demonstration of, anticipated interrogation and indoctrination methods. This is to include methods of persuasion and intimidation, the aims of such treatment and the best methods by which they may be resisted.

12. **Escape.** Training should emphasize that escape opportunities will diminish the nearer a prisoner comes to being confined in a permanent camp well behind the front. There is no set pattern for escape, but outstanding examples can be given from past experience. It must be stressed that opportunism, planning and organization are the main ingredients of successful escape.

13. **Prisoner Camp Organization.** Training should emphasize that a soldier remains a member of a military organization even though he is temporarily a PW. In addition, the need for maintaining normal military discipline in a PW camp must be stressed as this is the most important factor in maintaining morale under the adverse conditions of captivity. Subject to the maintenance of military discipline of his own organization, he is to continue to resist the enemy by all means at his disposal.

14. **Collective Training.** Every effort should be made during collective training to embrace all aspects of combat survival. Exercise planning must emphasize the component parts of combat survival training. The opportunity is to be given to put into practice the lessons taught in various stages of training. Self-reliance, survival and escape and evasion if threatened with capture may all be practised. Resistance to interrogation can also be practised if proper arrangements can be made. Special peacetime instructions and arrangements are necessary for the conduct of escapes and for the care of individual equipment.

15. **Courses For Unit Instructors.** If possible, courses are to be arranged for unit instructors, commanders, etc. Whatever the priority given to subjects on instructors' courses, the overall aim of emphasizing the evasion and survival of combat survival training must not be affected. Subjects suggested for inclusion on instructor courses are as follows:

- a. knowledge of how to live off the land;
- b. evasion techniques;
- c. escape techniques;
- d. organization and administration of PW camps;
- e. psychological effects of capture; and
- f. resistance to interrogation and indoctrination.

16. General rules governing the treatment of prisoners captured during combat survival training exercises are at Annex AB. General rules governing the interrogation phase of combat survival training exercises are at Annex AC.

ORGANIZATION AND PRINCIPLES OF INDIVIDUAL TRAINING

1. The general military training (GMT) subjects which should be included in any individual training syllabus are as follows:

Weapons	Nuclear, biological, chemical warfare
Drill	Combat First Aid
Tactics	Hygiene and Sanitation in the Field
Military Law	Living in the Field
Fieldcraft	Camouflage
Physical Training	Interior Economy
Range Practices	Navigation

2. As this training is continuously repeated in unit refresher training, a variety of instruction must be introduced at the unit level to maintain interest. These methods include physical training, sports, lectures, films, plays, discussions, demonstrations, use of models, visits to other arms, and the general maintenance of good morale.

3. **Physical Training and Games.** There must be a purposeful challenge to all physical training (PT) and from the start, the soldier must be taught the reasons for the various exercises and activities. Activities must be progressively regulated to the age and physical condition of those taking part. Close cooperation between the soldiers' commanders, the PT instructor and the medical officer will produce the best results.

4. PT tables have been designed to develop the soldier in order that he can carry out other forms of military training and operations. Once soldiers have successfully completed this basic PT training, they should advance to endurance training. Battle PT is designed to apply the skills and fitness of the combat soldier. The syllabus should include a large variety of purposeful activities, such as forced marching, obstacle courses, climbing, swimming, close combat, crawling, weapon handling and rappelling. Some of these activities should finish up on small arms ranges where soldiers must qualify on their weapons. This training gives ample scope for interest, competition and challenge; essential factors to battle training. Unit officers can vary this training and, with imagination, can create meaningful physical tests for their soldiers.

5. Games should be included in the soldier's programme. When major sports are not possible, games within the unit should be encouraged, with sub-units competing against one another. Another possibility is tabloid sports, consisting of group skills which involve everyone. They should be conducted on a competitive basis.

6. Physical training must become routine and a period should be set aside each day to allow all ranks the opportunity to maintain their physical fitness standards.

7. **Lectures.** Lecturing must not be overdone, however short lecture periods are an excellent form of instruction. No lecture period should last for more than 45 minutes without at least a 10 minute break. If wall maps, diagrams, or blackboards are used, they must be legible and visible to everyone in the class.

8. Hints on lecturing include:

- a. Speak to the group by using brief notes. When lectures on practical subjects are read, the group loses interest quickly.
- b. Do not have obstructions between the lecturer and the audience. Even a lectern will create a small barrier, and prevent the lecturer from establishing that personal contact with his audience which is so vital in maintaining interest.
- c. The lecturer must follow a logical sequence and avoid verbosity. The opening is important and must capture attention.
- d. Introduce some humour throughout the lecture to maintain interest.
- e. When possible use the actual equipment, such as radio sets, rifles or compasses for training, rather than blackboards or diagrams.
- f. Encourage discussion at the end of the lecture.
- g. Summarize briefly the main points and where possible have the group practise on the actual equipment.

9. A good principle to follow is to put the hardest work between breakfast and lunch and the most interesting work later on in the day.

10. **Training Aids.** Training aids such as film projectors, film strips, videos, visual aids and cut-away models are available at most schools and units. Following are some general points to remember:

- a. **Films and Videos.** Very often there will be no film which will exactly fit the scope of the subject to be taught, and many films contain out-of-date material. It is therefore important for the instructor to preview the film and make sure that it will suit his purpose. A film is seldom a satisfactory substitute for a demonstration which is specially prepared and designed for a particular purpose, though a film can often be used to provide atmosphere. It does provide a useful and economical method of portraying basic principles.
- b. **Film Strips and Visual Aids.** Film strips and visual aids provide valuable training aids, particularly where charts are not available. Slides, drawings and photographs can be projected on a screen. Film strips are already made up and reduce the time required to produce the training period.

Care must be taken in the employment of film strips because, as with films, they are ready-made productions which may not suit the instructor's purpose. Visual aids for projectors should be made up by the instructor to suit the lesson.

11. **Plays.** An instructional play may vary from a simple impromptu dialogue to an elaborate stage performance. Although the play cannot always replace the well-delivered lecture, it is often a more successful means of teaching, particularly if the instructors are young and not experienced in lecturing. It is obviously less frightening to be placed on the stage with several others, talking informally, than to be placed there alone to give a lecture directly to the audience.

12. From the audience's point of view, the play offers the following advantages over a lecture:

- a. It provides a realistic atmosphere.
- b. It relieves monotony by variation in scene and voice.
- c. It gives wider scope to the subject being taught.
- d. It mixes entertainment and humour with instruction.
- e. It is more expressive and explanatory.
- f. It provides a mental picture to memorize.

13. The following points should be considered when preparing a play:

- a. The aim must not be lost in a mass of padding and humour.
- b. Scenes should be short and concise, and the lessons emphasized by a narrator.
- c. Long speeches must be avoided and principles should be brought out by question and answer.
- d. Humour should be introduced but ridiculous situations must be avoided.
- e. Too much slang will spoil the effect of the play.
- f. Ambitious plays should be avoided. It is important to assess the stage properties available before writing the script.

14. A useful method of conducting instruction using plays is to divide the audience into syndicates. The actors then make certain deliberate mistakes, and these can be brought out during the discussions conducted by the narrator.

15. **Sand or Cloth Models.** The principles for the preparation of a model exercise are the same as for the other exercises except that the ground may be constructed to suit the exercise problems. The instructor should decide on his lessons, make a rough sketch of the ground and then make it up on the model, keeping his lesson aims constantly in mind.

16. It is usually a waste of effort to make too elaborate a model, since there may be a reluctance to break it up. As well, the same model should not be used too often or participants will lose interest. Except when studying a specific operation, no attempt should be made to precisely copy an actual piece of ground. It takes too long and cannot be portrayed accurately enough to guard against false lessons if the exercise is transferred to the actual terrain.

17. There are two main types of temporary models - cloth and sand. They can be either three dimensional, to represent a contoured map or a piece of ground, or flat, for use as a simple diagram. While the sand table is excellent for section and platoon level tactics and drills, the use of cloth models for training at company level and above is considered to be a better training tool and easier to provide. A cloth model is quickly laid, easily transportable, and can be made neat and presentable enough for most purposes. The great advantage is that it can be walked on. The materials generally required for the construction of a cloth model are shown at Appendix 1 to this annex.

18. In addition, permanent models of plywood or plastic can be made. These are most useful at a static headquarters, for planning purposes, or at schools for briefing when accuracy of detail is required. These models however, can be expensive to produce.

19. **Discussions.** The procedures, techniques and stage management of battle drills are best taught by means of discussions and demonstrations around a cloth model. The aim is to have the students bring out the main lessons. In well-conducted discussions, whether on models or in lectures, the instructor talks as little as possible. By skilful questioning he can lead the discussion along the required lines until an acceptable solution has been produced by one of the students. Only as a last resort should instructors give the solution themselves.

20. Instructors should know the names of all their students so they can then call on individuals to give their views. In every class there are some who like to talk, and others also are reluctant to express their opinions. The instructor must ensure that the latter group participates equally in the discussion.

21. **Demonstrations and Visits.** Demonstrations play a large part in all military training, particularly during peacetime because of shortages of equipment, resources and time. When demonstrations are staged, as many spectators as possible should be brought in to observe. Militia headquarters staffs, schools, services and air units should always be considered. Notes on demonstrations will be found at Appendix 2 to this annex.

22. **Visits to Other Units.** Cooperation between the various arms and services is the most vital part of all training and yet in peacetime it is generally difficult to arrange. Very often owing to transport difficulties or expense, it may be impossible to move heavy equipment such as tanks and specialized engineer equipments to training areas. Arrangements should be made for troops to visit the units or schools where these equipments are held. These visits should include all ranks to ensure maximum benefit is derived. As an example, a visit by officers from an infantry battalion to a helicopter squadron with the aim of establishing operational SOPs might take the following sequence:

- a. Before the visit, a pilot visits the infantry battalion and gives a series of lectures, followed by discussions, on the characteristics of helicopters, and then demonstrates tactics on a model.
- b. During the visit infantry officers have the opportunity to study in detail the different equipments held by the helicopter unit and to observe demonstrations. Further discussions are held and tentative SOPs established to be practised jointly when the two units operate together on field exercises.

23. **Building Morals During Individual Training.** When soldiers' satisfaction and individual needs coincide with those of their instructor, their morale is high. Commanders should encourage support from chaplains and medical, legal, personnel selection and social welfare officers during individual training to help build morale. These officers are normally on the Base establishment in peacetime, and liaison between them and the unit must be strong. Unit officers should take these officers into their confidence, and use their expertise and advice to help solve their soldiers' personal problems. Officers and instructors should hold meetings with their soldiers and provide counsel and guidance. The maintenance of good morale is a critical part of instruction and leaders must recognize the human aspects of training if high standards are to be achieved. Good leadership in the school or unit builds good morale.

CONSTRUCTION OF CLOTH MODELS

1. The materials required to construct a basic cloth model are:
 - a. A wooden or aluminum frame about 10 cm (4 inches) high by 3.5 cm (1 1/2 inches) thick which rests on the floor. Its length should be about twice its width and the upper edge marked in feet. The whole frame should be made up in convenient lengths which can be bolted together to ease transportation and storage.
 - b. If the model is to be used on a floor, a hessian foundation, the same size as the frame, should be underneath.
 - c. A cloth at least 30 per cent larger than the frame. The cloth may be of any colour, but green is most suitable. A tarpaulin makes a good substitute in the field.
 - d. Dinky toys, to represent trucks, tanks, guns, machine-guns, etc, or tokens to scale made of blocks of wood of different colours.
 - e. supply of different coloured wood and tape to represent roads, tracks, railways, rivers, localities, boundaries and objectives.
 - f. Sawdust dyed blue and green, or commercial equivalents, to represent water and woods. Hectograph ink is a suitable dye for sawdust.
 - g. Old newspapers or styrofoam to produce the necessary contours underneath the cloth.
 - h. Pins and drawing pins.
 - j. A North-South arrow and scale to orient the model to the ground.
2. Two to four people are required to construct the model. The time they take to complete it depends, of course, on the size and the accuracy with which it is to be constructed. A long stick or pointer marked in feet is a handy means of accurately siting the features on the model.
3. The following procedure is one method of reproducing an area of ground from a map:
 - a. Determine the exact area on the map that is to be set up on the model. The area selected must be the same shape as the model, and preferably of such a length that its scale is easily convertible to that of the model. If the model is 5 metres long, the length of the area should be easily divisible by 5, eg, 5000 metres.

- b. Divide the map into squares of suitable proportions. The grid square usually serves this purpose.
 - c. Set up the felt and the frame only, and with string or chalk, mark the felt in squares proportionate to those marked on the map.
 - d. With chalk, lightly mark on the felt the significant contours and build up the hills using crumpled newspaper, exaggerating the contours as participants always view the model from an elevated position.
 - e. Lay the cloth carefully over the top and adjust the hills as necessary.
 - f. Put in the other features, such as roads, rivers and woods.
 - g. Tape or wool representing roads and tracks should be pinned to the cloth, which must not be stretched too tight.
 - h. Put in the boundaries, localities and objectives as required.
4. **Alternate Materials.** Styrofoam cut in contour layers is often superior to newspapers and chicken wire. It can be walked on by players and flags indicating moveable pieces can be stuck into it. It can be covered by hessian which is then pinned down in the low spots by 3.5 cm (1 1/2 inch) nails. Roads and streams can be marked using felt tip markers. Trees and woods can be accurately represented by hand rolled balls of either brown or green "horsehair" packing material.

DEMONSTRATIONS

GENERAL

1. A demonstration is a means of showing and teaching one or more lessons to a number of people in a short time and in a practicable, pictorial and realistic atmosphere.
2. Demonstrations cannot obviously take the place of practical field training. However, well-staged demonstrations will at least show the combat potential of the different arms.
3. Demonstrations are not necessarily the only method of instruction, but they are often the best as they teach through the eye as well as the ear. Practice is the best of all forms of instruction, but successful practical work normally requires a demonstration to precede it to provide sound guidelines.
4. **Types of Demonstration.** The two main types of demonstration are indoor and outdoor. However, these do not fall into two watertight compartments and they will often overlap during a single event.
5. **Indoor Demonstrations.** Subjects can be illustrated in five ways:
 - a. on a model;
 - b. by play or playlet;
 - c. by film, video, film strip and visual aids; and
 - d. by exhibition, as in a museum.

Any one or more of these five means can be used in a single presentation.

6. **Outdoor Demonstrations.** Subjects fall into two general classes:
 - a. those requiring troops and equipment; and
 - b. those requiring equipment for exhibition as in paragraph 5d.

Many factors are common to all demonstrations. These will be discussed in logical sequence before going on to those points which are particular either to one type or the other.

7. **Aim and Lessons.** No one demonstration should cover too much. Before preparing one, consider carefully:
 - a. What is my aim? What am I trying to show?

- b. What lessons am I trying to bring out?

The scope must be limited to identified essentials. It is better for the spectators to leave knowing a lot about a little, than a little about a lot. Having defined the aim and lessons, they must be rigidly adhered to in the text and delivery of the demonstration. The lessons selected must have a direct bearing on the aim.

8. **Method of Presentation.** Having decided on the aim and lessons, next consider the best method of presentation. The choices are shown in paragraph 4. In selecting the method consider:

- a. Who are the spectators?
- b. What personnel and equipment are required and can they be made available?
- c. What type of location or area will produce the best results and is it available?
- d. What time of day and season of the year (if applicable) is most suitable?
- e. What training aid facilities are needed?
- f. What will the cost be and is it affordable?
- g. How much time is there for preparation and rehearsal?

9. **Rehearsals.** To be of any value a demonstration must be perfect in every detail. The more elaborate the demonstration, the more rehearsals will be required. Small demonstrations are not always simple because the finer points of detail have to be stressed and therefore, require particular practice and preparation.

10. Having estimated the time available for preparation, the rehearsal programme must be developed taking into account the following points:

- a. The participants must be given clear instructions as to what is required.
- b. The commander who has ordered the demonstration should attend an early rehearsal or planning session to ensure that the content and sequence are in accordance with his aim.
- c. One or more subsequent rehearsals will be required.
- d. The last dress rehearsal must be attended by the commander and staff responsible for the demonstration.

- e. Sufficient time must be allowed in the programme for extra rehearsals after the dress rehearsal in case the result is not satisfactory and alterations have to be made.

Preliminary rehearsals will seldom all be carried out with the full quota of personnel, equipment, ammunition, etc. At least one rehearsal however, must be done exactly as required at the same time of day.

11. **Explanations and Discussion.** No demonstration is of value unless it begins with a full explanation of its aim and content and ends with a summary on the lessons brought out. Unless this is done, there will always be some spectators who lose the thread of the subject and depart dissatisfied or with mistaken impressions.

12. Separate periods (indoor in the case of an outdoor demonstration) may be allotted for explanations and discussions, or these can be incorporated into the demonstration period itself. For large and elaborate demonstrations separate periods are preferable if time permits. In any case, when outdoors it is always necessary to preface a demonstration with an explanation on site before the activity begins.

13. **Programmes and Timings.** Having decided on the timings for the demonstration, the programme should be made out. The rehearsals will define the exact length of time required for the demonstration and supporting explanations. Remember that discussions and questions always take longer than expected. Timings must be adhered to accurately for the following reasons:

- a. If demonstration troops are kept waiting, they become discontented and may perform badly.
- b. If spectators are either hurried or kept waiting, they become irritable and will not gain full value from the demonstration.
- c. Other periods on either side of the demonstration are affected.
- d. Administrative arrangements throughout the day are upset.

14. **Preparation of Stores and Equipment.** Having decided what equipment is required, it is now necessary to obtain it, move it and install it at the right place and at the right time. It is essential that there be only one officer responsible for coordinating the details of a demonstration, either directly or through subordinates whom he appoints. Planning and hard work will ensure that equipment is moved and installed at the right place and time. When financial restrictions prevent the procurement of stores, imagination and improvisation will be required to acquire the necessary materials.

15. **Commentator.** Every demonstration, whether indoors or outdoors, requires a commentator. While the demonstration covers the physical subject and provides the atmosphere, the commentator brings out the aim and the lessons. The commentator must strike a medium between talking too much or during a long demonstration, talking too little, thus failing to maintain spectator interest. He must avoid speaking during noisy parts of the demonstration or when spectators are concentrating on some important point in the action of the demonstration itself.

16. When two or more stands are used, the loudspeaker should be mounted in a vehicle, or if more than one set is available, they can be installed at each stand in advance.

17. **Scripts.** Scripts may range from informal notes to elaborate prose. The more complicated the demonstration, the more detailed the script. A script is written material which covers the actions and speech of the actors. For a military demonstration, it should be very comprehensive and include stage management directions as well. It is the operations order to the performers and includes:

- a. instructions for preparation;
- b. speech and action during the demonstration; and
- c. details of aids during the demonstration.

It should be a complete guide on the preparation and execution of the demonstration from start to finish.

18. **Welfare of Spectators.** A demonstration, however well it is carried out, is valueless if the well-being of the spectators before, during and after the presentation is not considered. If the administrative arrangements are inadequate, the spectators will be unreceptive. Administrative arrangements for a demonstration must be considered under two headings:

- a. those during the demonstration; and
- b. those before and after the demonstration.

19. **Discipline.** A well organized and executed demonstration depends on instructions being obeyed promptly. The organizers must not be hesitant to issue such instructions however senior the spectators, provided they are issued tactfully and clearly.

20. The effectiveness of a demonstration demands good psychology on the part of the organizers. The acid test is to find a happy medium between over-regimentation of spectators and shortages of control and amenities.

HINTS FOR THE PREPARATION OF INDOOR DEMONSTRATIONS

21. **General.** There is no firm division of types of demonstrations. Models, plays, films and videos can all be used in one period.
22. **Seating and Lighting.** A short wide room is better than a long narrow one. The fewer the rows of chairs the easier it is to see. Raise the chairs on tiers if possible. If not, raise the scene of the play or model above ground level. It is preferable to have light coming from in front, the sides or above demonstrators. Light from behind performers must be avoided. Focus artificial light directly on to the demonstration, particularly after dark. Arrange for a quick and efficient blackout system when visual aids are used in the presentation. Ensure that an electrician is at hand in case the lights or other electronic equipment fail.
23. **Acoustics.** Test the acoustics, preferably with the room or hall full. An improvised method of overcoming bad acoustics is to sling cross-wires horizontally across the room and drape blankets or hessian on the side and back walls. The commentator must test the microphone beforehand and be prepared to adjust his voice as required.
24. **Cloth and Paper Drops and Blackboards.** These must be neatly and carefully set out. Blackboards are usually best prepared in advance by the signwriter. If they are to be used during the period, then the layout must be planned neatly. Blackboards and paper drops:
 - a. must be positioned to strike the eye;
 - b. must have large enough letters and figures for all to read. (5 cm (2 inch) to 10 cm (4 inch) for 40 spectators or more is the ideal);
 - c. should be kept covered or rolled until actually needed so as not to distract from other items; and
 - d. should have varied colours to stress and differentiate words and expressions.
25. **Sound Aids.** Loud speakers, loud hailers and other sound aids are all useful. Sound coming from behind is very arresting if not overdone. Always ensure there are back-up equipments.
26. **Commentator.** A commentator should:
 - a. make definite breaks during the demonstration and not speak at the same time as performers;
 - b. use an assistant to point to drops and models and to move props;
 - c. have a lectern or suitable table for notes; and
 - d. be above the level of spectators closest to him.

27. **Scripts and Notes.** An indoor demonstration must be based on a written script. Initially, it must be prepared in detail, even if performers do not adhere to it rigidly. Scripts are better when not read verbatim. On the other hand, when memorized, speakers must ensure that passages are not left out.

28. **Demonstration of Exhibits.** The effective display of material and equipment requires the window dresser's and advertising salesman's art. As with the presentation of all demonstrations, the effects are mostly psychological. Ask yourself "what catches my eye most?". Points on presentation include the following:

- a. Ensure that the exhibits are clean, neatly arranged, well spaced and easily seen.
- b. Make full use of colour and pictorial aids.
- c. Vary the size and design of lettering, and keep the writing of explanatory notices short and clear.
- d. As far as possible display exhibits in a natural setting.
- e. Have extra examples for spectators to handle. It is irritating to be faced with notices such as "Please Do Not Touch".
- f. Topical catch phrases appeal to visitors' imaginations and are appreciated.
- g. Ensure carefully briefed experts are available to answer spectators' questions, but avoid pushing facts down their throats. This applies especially to senior officers. The more the visual explanation reduces the need for questions the better.
- h. Within the limitations of control, allow spectators a free hand to go where and look at what they wish, and allow them to take their time.

The same remarks apply to large scale outdoor exhibitions.

HINTS ON THE PREPARATION OF OUTDOOR DEMONSTRATIONS

29. Having decided on the subject and defined the aim of the demonstration, the next step is to assess the troops, stores and equipment required. The fact that certain items cannot be made available, or improvised, with influence the scope of the demonstration. The following are some of the limiting factors:

- a. Are the necessary troops and equipment within reasonable distance of the site of the demonstration?
- b. If not, can they be accommodated and maintained locally?

- c. Is there sufficient ammunition both for rehearsals and the main performance?
- d. If the demonstration site has to be specially prepared in advance, is the necessary labour and materiel available?
- e. What items will cost money? What has to be accounted for and will the budget be sufficient?
- f. How much improvisation has to be done? Of the stores and equipment that have to be improvised, how much is within the scope of the unit or formation, and how much can be achieved in the time available?

30. These notes cannot cover the stores and equipment required for all types of demonstrations. In general terms, some items have to be collected from bases or other units for most tactical demonstrations. Many of these will have to be improvised. Some items are:

- a. assuming the use of live ammunition and therefore no live enemy, collecting enemy dummies, weapons, ammunition and uniforms;
- b. targets and landmarks in the form of figures, screens, flags, dummy tanks and vehicles;
- c. explosives (and electrical equipment to set them off) for simulating realistic fire; and
- d. timber and camouflage material (and the necessary labour to handle it) for building artificial structures and features on the landscape.

31. Before starting rehearsals, demonstration troops must be briefed fully, either with the aid of a model or map, or in sight of the ground itself. This briefing will include not only the outline of the demonstration as given to the spectators, but will also aim at covering stage management. All commanders down to section leaders and equivalent require this preliminary briefing. If time and space permit, the best results will be achieved if all ranks are put clearly in the picture at the start. So briefed, they can then be relied upon to play their parts with enthusiasm.

32. Regardless of the type of demonstration and the number of rehearsals required, there are four stages of briefing to be covered:

- a. preliminary briefing;
- b. first walk through - often commanders only;
- c. the "dry" rehearsal one or more with all troops and equipment on the ground;
- d. the "wet" rehearsal one or more complete rehearsals to confirm safety, timings, etc; and

- e. at least one full dress rehearsal.

33. In selecting ground, the sites for the demonstration and spectator stands must be considered at the same time. The demonstration site should:

- a. allow the portrayal of action under ideal conditions in order to minimize distractions from the lessons to be taught;
- b. permit the demonstration to comply with applicable safety regulations;
- c. be located in an area where damage will not incur large compensation costs; and
- d. be easily accessible for both participants and spectators.

Stands should be sited where spectators can see all aspects and should not face, if at all possible, into the sun or prevailing wind. A minimum number of stands should be used. Movement from stand to stand takes time, irritates spectators and upsets the continuity of the demonstration.

34. Adequate signing and marking of routes and stands is most important. If notices are clear and foolproof, spectators can concentrate on the demonstration without being distracted by administrative details. The following points should be noted:

- a. Delineate the stand area with tape.
- b. Mark "in" and "out" routes with notice boards and/or tape.
- c. The controller (or commentator) should have assistants or guides pointing out features and items of importance.
- d. The controller and any assistants should carry or wear distinguishing marks.
- e. If necessary, sign and mark the area of the demonstration itself, even at the expense of realism if it helps to emphasize the lessons.

35. The following points apply to public address equipment:

- a. Make use of loudspeakers, particularly with large audiences.
- b. Check the placing of the speaker(s), to ensure everyone can hear.
- c. Test speakers at a rehearsal to see if and when speech can be heard, particularly in a noisy demonstration.
- d. Have a reserve speaker, microphone and a technician close at hand.

36. When possible, communications for the control of demonstrations should be triplicated, ie, radio, line and visual signal. All three means must be rehearsed in advance. Whatever the scale of communications, a safety net is required for live fire demonstrations. This should be separate from the control net. In a large demonstration involving a number of different arms, each arm needs its own separate communications but all are coordinated from a central station. Once a live demonstration is under way it must be possible to stop it hurriedly or modify it in the event of accident or other unforeseen circumstance.

37. A demonstration held in rain or very cold weather is of little value. Therefore:

- a. Provide cover close to the stand if it is not possible to cover the stand itself.
- b. Refreshments located near the stand are always welcome.

If possible alternative programmes should be planned if the demonstration has to be cancelled as a result of bad weather, particularly if spectators have come a long way.

38. Even where senior officers are concerned, try to reduce the number of vehicles to a minimum. It simplifies the parking problem. Buses can often be used and are more comfortable than troop carrying vehicles. Good traffic control and parking arrangements must also be made.

39. Adequate medical precautions must be taken to deal with casualties. In the event of casualties it is important to collect evidence immediately, before everyone disperses. This will be required for the subsequent inquiry. Recovery arrangements for bogged or broken down vehicles must also be made.

GLOSSARY OF TERMS USED IN EXERCISES

1. **General Instructions.** These will include all the staff duties and administrative details which must be known by the formations, units and individuals involved in the exercise, in any capacity.
2. **Special Instructions.** These are part of the exercise papers which, for reasons of exercise security, are issued only to part of the forces participating, eg, instructions for the assembly of a skeleton enemy force, or one of the sides in a two-sided exercise with troops.
3. **General Idea.** This gives both sides the general tactical setting.
4. **Special Idea.** In two-sided exercises there will be two Special Ideas issued, one for own troops and one for the enemy. In one-sided exercises the Special Idea Enemy is replaced by Instructions to Skeleton Enemy.
5. **Narratives.** These are used in TEWTs, telephone battles, war games, and sometimes in signal exercises, to cover lapses of time which may occur between the various situations presented in the exercise. Narratives should be realistic, short, relevant, and include the forces available, the air situation and any new organizations.
6. **General Outline.** This is for the benefit of control and umpire staffs and gives the outline of all the phases of the exercise.
7. **Outline of Events.** This is for control and umpire staffs and gives the events in outline for the whole exercise with estimated timings for each phase. It is a more detailed breakdown of the General Outline and forms the basis on which individual control briefs are written.

SUGGESTED FORM OF TIME-TABLE FOR A TACTICAL EXERCISE WITHOUT TROOPS

2 BDE GP
 TWET NE (TO BE HELD ON 17 MAY)
 TIME-TABLE

		Issue of Narrative		Discussion					
Ser	Narrative	Place	Time	Issue of Scale	Time for Preparation	Place	Time	Time for Discussion	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
1	General idea Narrative I	Camp	0900 hrs 15 May	1	Own Time	Stand 1	0900 hrs 17 May	30 mins	Stand 1 GR 593 4670. Dvrs report to Tpt Offr for vehs to move to Stand 3. Tell students to leave lunch in cars. Stand 2, Xrds 4671. During consideration of requirement director will hold short conferences on Requirement 1 at Stand 2. At 1500 hrs report pts for discussion to director, who will sum up at 1530 hrs. Stand 4. Return as per Gen Instrs para 6.
2	Narrative II	Stand 1	0930 hrs 17 May	2 etc.	30 mins	Stand 2	1000 h	40 mins	
7	Narrative V	Stand 4	1500 hrs	5	10 minutes	Stand 4	1510 h	20 mins	

GUIDANCE FOR DIRECTING STAFF IN A TACTICAL EXERCISE WITHOUT TROOPS

1. Maintain interest in your syndicate by ensuring that:
 - a. They have correctly related the map to the ground and that they are all briefed on the situation.
 - b. All arms are included in discussions.
 - c. You have a stock of relevant impromptu questions.
 - d. The atmosphere created is one of constructive examination of the problem.
 - e. The aim is being maintained throughout the TEWT.
 - f. Let your syndicate speak as much as possible and you as little.
 - g. After every narrative, requirement or solution, pause for clarifying questions.
 - h. When receiving solutions, insist on:
 - (1) an estimate including an outline plan; and/or
 - (2) verbal orders.
2. Unless a participant presenting a solution becomes very confused and the value of the discussion is likely to be lost, do not interrupt or correct errors. Make notes of such errors and retain these for your final discussion.
3. When criticising solutions, observe the following sequence:
 - a. Ask a student for his/her solution and the rationale for it.
 - b. Ask other students to criticise that solution. Stop them if they do so by stating their own plans.
 - c. Ask the first student to reply briefly to this criticism.
 - d. Hear the solution from the second student.
 - e. Ask another student for criticisms of this solution etc.
4. Then, make your final remarks in the following sequence:

- a. Assess the validity of the criticism.
 - b. State strong and weak points in solutions.
 - c. Give your criticism.
 - d. Give directing staff solutions only if it is necessary.
 - e. Sum up by reviewing the main lessons.
5. The following is a suggested layout for DS notes:
- a. **Problem -**
 - (1) time to consider;
 - (2) time to discuss; and
 - (3) stand location for problem.
 - b. **DS notes on Problem 1 -**
 - (1) aim;
 - (2) lessons to be brought out
 - (a)
 - (b)
 - (c)
 - (3) manual references;
 - (4) points that should be included in answers and points for discussion;
 - (5) suggested solutions;
 - (6) solutions considered wrong (with reason);
 - (a)
 - (b)
 - (7) data (if applicable);

- (8) instructions for the next problem; and
- (9) technical data such as range, ammunition availability and characteristics of specialist equipment.

6. Short estimates are required for DS in tactical problems to cover:

- a. mission;
- b. courses open;
- c. their advantages and disadvantages; and
- d. the suggested (but not mandatory) solution which will form the basis for the next problem.

7. DS criticism should be constructive and not overbearing. Nevertheless, tactical errors or major oversights must be corrected whenever they are noted.

8. Specimen DS mapboard notes are at Appendix 1 and a suggested skeleton format for DS notes is at Appendix 2.

SPECIMEN DS MAPBOARD NOTES

EXERCISE FIRST STEPS - PROBLEM 1

Problem Estimate and Outline Plan DS)	Sub-Syndicates	View pt as) arranged by
	Comd 4 CMBG	
a. Axes		
b. Objs	CO RCD	
c. Phases		
d. Allotment of SP	CO 1R22eR	Timings
e. Timings	CO 1RCHA	(insert)
f. Fire Plan		
g. Reorg	CO 4 Fd Sqn	

DS
NOTES PTS FOR
PARA DISCUSSION SUMMARY NOTES

2 **Aim** To close up to the frontier ASP.

4a **Ground** **Grd Vital to En** - Brownsburg Firs
(other important features - airfd
and Roke Farm).

4b **Approaches**
A. Long distance. Water obs to
APCs. By-passed by armour.
B. Overlooked - not considered.
C. Most direct. En Coy Lachute Farm.
Dead grd - Brownsburg Firs.
Threat from airfd, armour.
Defiladed from EAST of 74 easting.

BEST AVAL - SELECTED

D. Build-up area-enfiladed from Roke
Farm.

5a **En** **Assessment of Tasks** - En Coys Lachute Farm,
Brownsburg Firs. Therefore six attacking coys:

two bns, two phases.

5b **Res:** Threat to left flank and from armour on and north of airfd. Therefore retain armour on right: **loc of res** (4 RCR).

5c **Exploit and Reorg.** En still on Roke Farm feature and in Brownsburg. Therefore cir and secure. C atk likely to Firs, airfd or Roke Farm. Therefore incl all three in reorg.

6 Time and Space **Attack ASP** - 1R22eR best for Phase 1 to Lachute Farm. Now 0800 hours. Bde orders gp by 0915 hrs. 1R22eR recce and orders complete by 1030 hrs. Therefore H hour 1030. Adm lift 1100 metres, mins, debus 1 min, on foot 21 mins, fight through 30 mins 56 mins.

8 Courses open a. Phase 1 plus subsidiary attacks to airfd and Roke Farm - reduces threat to flank - dissipates str incl arty.

b. Conc on Firs - simple - once on Firs other features exposed.

ADOPT COURSE 3

9 Outline Plan Phase 1 - Lachute Farm - 1R22eR.
Phase 2 - Brownsburg Firs - 3 Mech CDO
Exploitation - air exploit to frontier.
Reorg - 1R22eR secure Lachute Farm and
AIRFD, 3 Mech CDO Firs, 4 RCR Roke Farm.
Armour - Sqns with bns. res.
Arty - Phase 1 sp 1R22eR, phase 2 sp 3
Mech CDO.
Engr - Tp to 1R22eR and 3 Mech CDO. Routes.
Coord - H hour 1030, op complete 1430 hours.

Sum up ground vital to en; max force; incl fire-

power;

simple plan;

Issue Narrative 2 and Problem 2.

Discussed 1445-1600 hours.

A SUGGESTED SKELETON FORMAT FOR DS NOTES
(A guideline only)

EXERCISE RIGOR MORTIS

DS NOTES

GENERAL

1. Introduction. A **gen statement covering the aim of the TEWT.**
2. **Timetable.** A gen outline of the programme or ref to the Gen Instrs.
3. **Conduct.** A gen statement on the method of conducting the TEWT.

PROBLEM 1

4. **Problem.** A repetition of the problem to avoid cross reference.
5. **Aim.** The director's aim in setting the problem and the main lessons to be brought out during discussion.
6. **Time.** Details of the specific time allotted for consideration and discussion.
7. **Short Estimate (or proposed line of discussion).** Designed to highlight the courses open with their various advantages and disadvantages (or to highlight the various principles or pts to be brought out in gen discussion).
8. **Suggested Solution.** To form a co-ordinated basis for the next problem and provide a reasonable solution for "one way of doing it".
9. **Data (if applicable).** Any tech data on wpn or eqpt capabilities, etc, that may be necessary to sp the suggested solution.
10. **Summary.** A summing up of the lessons to be learned.
11. Instrs and Papers for next problem.

PROBLEM 2

(As above)

PROBLEM 3

(As above)

SUMMARY

12. A final summing up of the lessons learned throughout the TEWT.

SUGGESTED STATES, RETURNS AND REPORTS FOR USE IN INDOOR EXERCISES AND CPXS

The table below outlines the type of report which should be required. As report titles often change, it will be the responsibility of the Exercise Director's staff to ensure the list is accurate for each exercise.

Ser	Return to SITREP	Sit as of hrs	Units		Sent by Bde and/		HQ Div		Comments
			To	By (hrs)	To (hrs)	By (hrs)	To	By (hrs)	
1	SITREP	0600	Bdes HQ Arty	0630	Main Div	0900	Main Corps	1030	Special SITREP may be made at any time when the sit demands. See B-GL-303-002/FP-000.
2	Patrol report	Previous night activity	Bdes Corps	0800	Main Div	1000	Main	1200	See B-GL-303-002/FP-000, Staff Duties in the field.
3	Gun and AFV states	0600 1800	Bdes	0800	Main Div	0900 2100	Main Corps	1100 2200	a. Sent by armd units only. b. See B-GL-303-002/FP-000.
4	Air Request Message	For next day	Bdes	1400	Main Div	1500	Main Corps	1600	See B-GL-303-002/FP-000.
5	Vehicle casualties beyond unit repair	0600 1800	Bdes	0900 2000	Rear Div	1100 2200	Rear Corps	1200 2400	a. Cas tp be stated Y or Z. b. On message form. (Y = fit in 24 hrs) (Z = replacement required)
6	Casualty and Strength State	0001	Bdes HQ Arty	0200	-	-	-	-	See B-GL-303-002/FP-000.
7	Personnel Strength Report	0001	Bdes	0200	Rear Corps and Div	0400	-	-	See B-GI-303-002/FP-000.
8	Artillery ammo return	0600	HQ Arty	0900	HQ Arty	As necess ary	-	-	See B-GL-303-002/FP-000.

GUIDANCE FOR LOWER CONTROL IN SKELETON EXERCISES

1. The task for lower control is to provide a continuous and detailed picture of the activities of the troops they represent. The picture painted must conform to the Outline of Events, to the instructions given by the director or his staff and to the actual events which units/sub-units would be able to report if they were on the ground. Controllers may represent several different appointments during an exercise and when passing a message they must make it absolutely clear who is being represented.

2. The following points will help lower control in the preparation of their own detailed briefs:

- a. Carry out imaginary reconnaissance and visits as if on operations in war (if called to a HQ, estimate the journey time and do not report beforehand).
- b. Report your own positions, moves and patrols.
- c. Report enemy contracts, actions and air activity.
- d. Submit fire plans.
- e. Submit SITREPs, shelling reports (SHELREPs), mortar bombing reports (MORTREPs), and other states and returns (not always on time).
- f. Report on enemy fire and your own engagement of artillery targets. It is not essential to simulate artillery fire orders but the description of the target engaged and results are required, and ammunition expended must be reported to HQ Artillery.
- g. Report all nuclear and chemical strikes, appropriate radiation strengths, casualty and damage information, and areas of chemical contamination.
- h. Introduce special events as detailed by the exercise director or his staff.
- j. In conjunction with engineer lower control, and when appropriate:
 - (1) Ask for mines to be laid.
 - (2) Check information on reserve demolitions.
 - (3) Ask for stores for CP protection.
 - (4) Query water contamination.

- (5) Ask for damaged routes to be restored.
 - (6) Report damaged enemy AFVs requiring demolition.
 - (7) Build up frantic moments during reserve demolition phases (casualties to firing party, screen delayed, firing circuit cut, etc).
- k. Represent liaison officers as requested by Exercise HQ.
- m. In conjunction with the administrative unit's lower control:
- (1) Run short of ammunition and POL (relate to battle).
 - (2) Call for urgent replacement of vehicles/radio/weapons (particularly after air attack).
 - (3) Report PW who need medical attention.
 - (4) Ask for rations for starving refugees and give an RV.
 - (5) Call for medical assistance due to a sudden and excessive load on a unit medical station (UMS).
 - (6) Involve administrative units and echelons in the battle where realistic eg, from infiltrators.
3. Time unit movements realistically and defeat any "chinagraph" moves. If in doubt about the time taken for a move consult one of the DS.
4. It is suggested that control prepare detailed briefs one phase ahead and concentrate on having material ready for the busy periods. Forecast logs should be prepared in pencil with wide spacing to allow the insertion of additional detail and incidents. It is not possible to prepare briefs or messages too far in advance in two-sided exercises.
5. Controls should also note points for the final conference as they occur.

MAPS FOR USE IN INDOOR EXERCISES AND CPXS

Ser	Location	Purpose	Scale	Remarks
1	Beside each offr-manned rad or tele.	Working map for rapid reading of msgs received and passed.	1:50 000	To be used when Ser 2 maps are not immediately beside Duty/Officer.
2	On wall.	Master maps of current sit own tps.	1:50 000 1:25 000	The smaller scale map will show relevant flanking and superior fmns.
3	On wall.	Int maps showing en locs and ident.	1:50 000	
4	On wall in info room.	Info map for visitors.	As in Ser 2.	Only to be used when special staff (eg. LOs) are aval to maint them.
5	On wall in Arty Office.	Arty planning maps.	1:25 000 1:50 000	
6	On mapboards.	For personal use of Comds SOs, LOs away from HQ attending O Gps etc.	As required.	

SUGGESTED DISTRIBUTION OF MAPS IN ANNEX G

Issued to	SERIAL 1 Working Map	SERIAL 2 (Own tps master map)	SERIAL 3 (Int Planning)	SERIAL 4 (Information)	SERIAL 5 (Artillery)	SERIAL 6 (On map- boards for O Group etc.)
Ops	*	En sit will be updated periodically by int staff.				At least two. *
Int	To incl own tps sit in outline.*		*			*
Liaison				En and own tps.*		One for each LO.*
HQ Arty					To incl own tps sit in outline and arty int.	*
CD Fd Sqn	*	To incl engr int.*				*
Adm	*	*				*
CO Svc Bn		*				*

CONTROLS: On the central table are mounted 1:25 000 control and 1:50 000 planning maps. Working maps on mapboards which will also serve for O Groups are required by controls. In nuclear exercises, a vertical nuclear planning and strike map is also required.

* Denotes locations of maps.

PREPARATION AND CONDUCT OF SKELETON EXERCISES

BRIEFS ISSUED SEPARATELY

Below is a list of the exercise staff who are likely to require separate briefs on the latest situation in specific areas and some suggested headings. The reason for issuing separate briefs is that only those directly concerned need read them in order to realistically perform their duties. There may also be forces with independent tasks whose instructions are better issued separately, eg, topographical information for a long range patrol.

1. **Artillery**

Air Defence	Weapon Positions
Ammunition	Location of known hostile batteries
Code words for tasks	OPs
Locating units	Registration
Dumping arrangements	Survey
Engagement of tasks by regiments/batteries	Nuclear and chemical strikes

2. **Engineers**

Damage control	Forecast tasks, including airstrips, roads POL installations, etc.
Dispositions	Allocation of equipment
Estimate of equipment required	Stores available, including explosives mines, defence stores
Plant state	Topographical intelligence
Water points	Nuclear demolitions

3. **Air**

Co-ordination	Recognition signals
Enemy air defence	State of readiness

Enemy air strength

Tactical reconnaissance

Forces available

Transport and supply

Locations

Types of aircraft

Radar beacons

4. **Service Support**

Air supply

Ordnance

Arrangements for PW

Provost

Civil affairs

Reinforcements

Communications

Repair and recovery

Damage control

Replacement of tanks and vehicles

Dumping arrangements

State of ammunition

Location of administrative areas

State of POL

Location of Maintenance areas

State of supplies

Medical arrangements

Traffic Control

Nuclear and chemical strike reports

Transport situations

Nuclear warheads

Water

5. **Nuclear and Chemical Strike Information**

Number of weapons, yields, and delivery systems available to the enemy

Restrictions of their use

Types of burst to be used

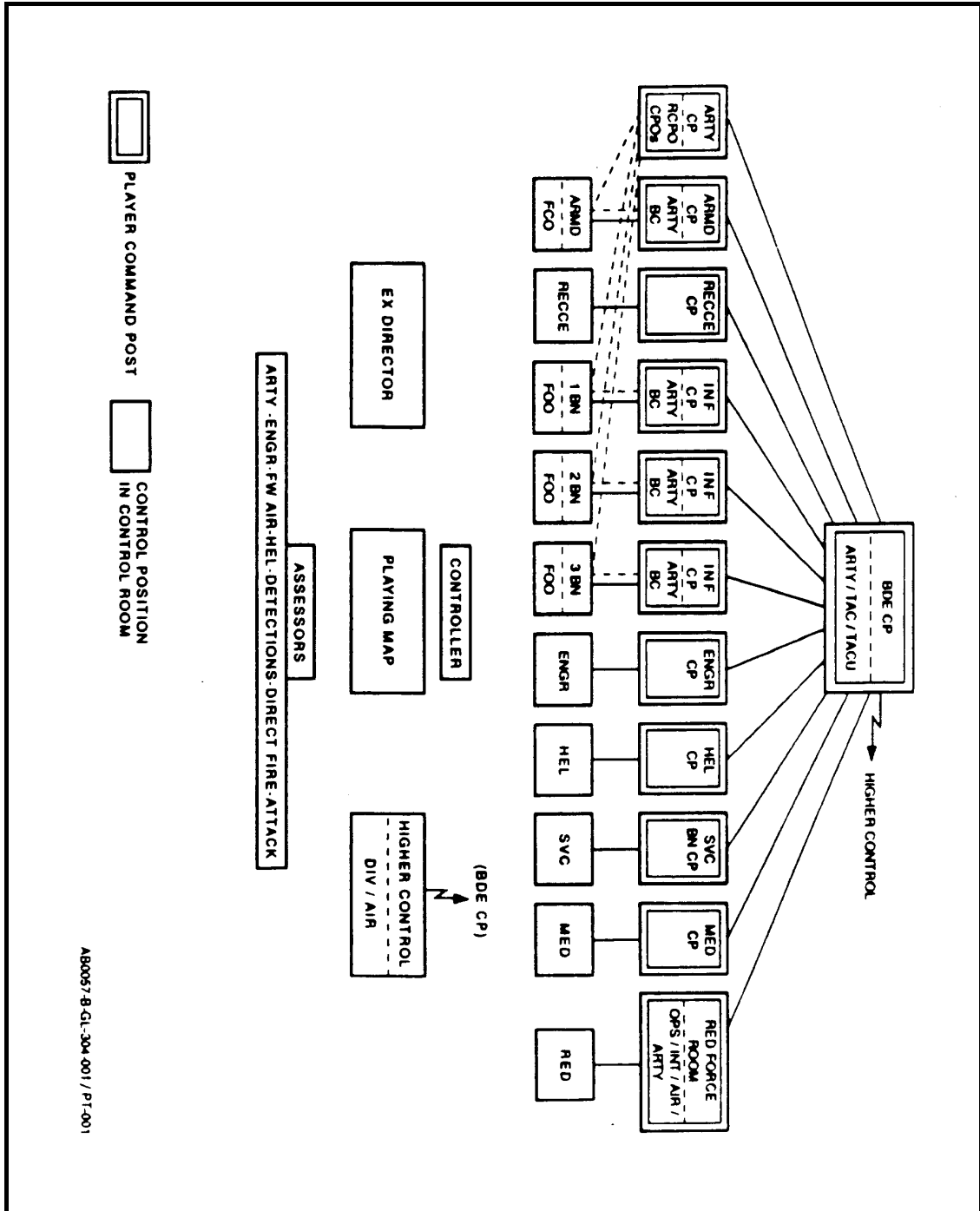
Pre-planned fall-out, winds and fall-out patterns for different yields

Nuclear and chemical strike reports

Method of imposing damage, areas of contamination and downwind hazard from chemical attacks and casualties

Radiation Reports

WAR GAME ASSISTED CPX - SCHEMATIC OF TYPICAL LAYOUT AND COMMUNICATIONS BETWEEN CONTROL FUNCTION AND EXERCISE FORMATION AND UNITS



WAR GAME ASSISTED CPX -**CONTROL MAP MARKING SYSTEM (IDENTIFIERS)****1. Flags****a. Shape**

- (1) Complete unit (eg, Sqn/Coy, Tp/P1).
- (2) Unit HQ (eg, Bn HQ, P1 HQ).
- (3) Section/detachment (eg, inf sec, mor gp, Atk wpn).

a. Colour

- (1) Red - Enemy 1 Regt
- (2) Light Green - Enemy 2 Regt
- (3) Pink - Enemy 3 Regt
- (4) Black - Enemy armour
- (5) Purple - Enemy reconnaissance
- (6) Dark Blue - Enemy artillery
- (7) Dark Green - Friendly 1 Inf Bn
- (8) Orange - Friendly 2 Inf Bn
- (9) Dark Brown - Friendly 3 Inf Bn
- (10) Red/Yellow - Friendly armour
- (11) Red/Blue - Friendly artillery
- (12) Light Blue - Engineers
- (13) White - Formation HQ and service elements
- (14) Yellow - Helicopter and air elements

c. **Marking.** Individual pin designation is typed on a DYMO label and affixed to the flag.

2. **Pins**

a. **Short Point (3/8")**

- (1) Dark Green - scattered mines
- (2) Silver - unattended ground sensors

b. **Long Point (11 1/4")**

- (1) Red - enemy Motor Rifle flags and proposed moves
- (2) Blue - friendly flags and proposed moves
- (3) Black - enemy tank flags

c. **Pillar**

- (1) Green - state 1 (safe) demolition
- (2) Yellow - state 2 (armed) demolition
- (3) Red - fired and completed demolition

d. **Map Indicator (11/16" and 15/16")**

- (1) Red - enemy artillery fire
- (2) Blue - friendly artillery fire
- (3) Yellow - nuclear fire
- (4) With Plasticine added to top of pin - mushroom for grouping pins on one location.

3. **Beads**

a. **Round (1/4")** (Placed on pin between head and flag.)

- (1) Yellow - anti-armour weapon
- (2) Green - anti-air weapon

b. **Conical (1/2")** (Placed on long straight pin above flag.)

(1) Red - enemy helicopter

(2) Blue - friendly helicopter

4. **Washers (1/2" painted)**

a. Red - halted piece not deployed

b. Orange - piece prepared to move

c. Green - moving piece

d. Light Blue - piece detected previously in present location by helicopter.

e. Dark Blue - piece detected previously in present location by ground element

f. Brass - added to pin to indicate each vehicle casualty

5. **Pressure Sensitive Graphic Tape**

a. Blue - unit boundaries

b. Green - minefield perimeters

6. **Absorbent Cotton.** Added under artillery indicator pin to define effective coverage of smoke.

7. **Tentest Movement Boats.** Used to facilitate movement of a number of pieces along same route.

8. **Clear Talc Flare Patterns.** Cut to scale to present effective coverage of flare from a particular weapon type.

9. **Cardboard Arrows.** Used to represent major advances or attacks (red and blue).

SPECIMEN OUTLINE OF EVENTS IN A TWO SIDED EXERCISE

UNIT or FORMATION.....							Nickname
DATE OF EXERCISE.....							
Ser	Date	Time	Situation	Action by	Action by umpires	Lessons	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
10	9 Aug	1300 hrs	2 Bde Gp adv checked by rear gds en 1 Motor Rifle Div* holding line of River BARRON from all incl... to..... *The skeleton force.	Two courses open to 2 BDE Gp a. Force crossing over River BARRON in vicinity of X. b. To avoid frontal attack on River BARRON posn by thrust to SE of Y.	If a. is followed: (1) dependent on the speed of prep and on dispositions, permit penetration of en posn as far Z; or (2) any undue exposure during recce to be heavily punished during asslt and success limited accordingly. If b. is followed: (3) since en hold this part of front lightly, any well prepared attack should be allowed consider able success; or (4) attack should be held up locally where en centres of resistance have not been loc, or neutralized by indir fire.	a. Quick and efficie nt recce. b. Quick handling of info & fire planning.	Important that director should know immediately which course 2 Bde Gp proposes to take.

DISTRIBUTION LIST FOR A BRIGADE EXERCISE**WITH TROOPS (NOTE 1)**

2 Bde Gp Exercise.....(nick-name)

9-11 Sept 92

DISTRIBUTION LIST**Serial**

1. General Instruction
2. General Idea
3. Special Idea - Friendly Force (Issued 0800 hrs 3 Aug)
4. Special Idea - Enemy
5. Special Instructions - Friendly Force
6. Special Instructions - Enemy

Recipient	Serials					
	1.	2.	3.	4.	5.	6.
Comd 2 Bde Gp	1	1	1	1	1	1
SSO (Ops) 2 Bde Gp	1	1	1		1	
SSO (Adm) 2 Bde Gp	1	1	1		1	
Bde Sig Offr	1	1	1		1	
Chief Umpire	1	1	1	1	1	1
Senior Admin Umpire Friendly Force	1	1	1	1	1	1
Senior Umpire	1	1	1	1	1	1
Senior Umpire Enemy Force	1	1	1	1	1	1
Umpires 1 RCR	8	8	8	8	8	8 (Note 2)
2 RCR	8	8	8	8	8	8 (Note 2)
3 RCR	8	8	8	8	8	8 (Note 2)
8 CH	8	8	8	8	8	8 (Note 2)
2 Fd Rgt	5	5	5	5	5	5 (Note 2)
1 Fd Sqn	1	1	1	1	1	1 (Note 2)
Comd 2 Bde Gp	1	1	1			
Comd Enemy Force	1	1		1		1
1 RCR	7	7	7			
2 RCR	7	7		7		
3 RCR	7	7		7		
8 CH	5	5		5		
2 Fd Regt	3	3		3		
1 Fd Sqn	1	1		1		
HQ Mobile Command	1	1	1	1	1	1
File and spare	6	6	6	6	6	6

NOTES

1. This complete distribution list is for control and office use only and is marked as such. Separate distribution lists for 2 Bde Gp and "enemy" are required so that each side does not know the order of battle of the other.
2. Umpires' copies are often issued by senior umpires at the umpires' preliminary conference. Ideally each umpire should have one complete copy of the exercise, but in a large exercise this is seldom practicable or necessary and distribution can be considerably reduced.

ELECTRONIC WARFARE IN EXERCISES

1. **The Effects of Enemy EW.** The effects of enemy EW can only be exercised practically during one and two-sided exercises with troops and during field CPXs. However, on indoor CPXs some effects can be assessed and applied by the control staff.
2. **Employment of Our Own EW Resources.** Exercising commanders and staff in the practical employment of our own EW resources can only be done during a two-sided exercise with troops. This gives the EW unit a realistic enemy electronic order of battle to attack. However, the co-ordination and planning necessary for the employment of EW, as well as the introduction by control staffs of the intelligence output of intercept, direction finding and analysis can be included on indoor and field CPXs, one-sided exercises with troops and war games where the appropriate level of HQ is being exercised.
3. **Control Over EW Play.** Since formation level two-sided exercises with troops are a relatively rare occurrence, it follows that when EW troops are available, they will most often be employed to represent the effects of enemy EW. There seems to be a fairly widely held view that the employment of an EW unit with the "enemy" against a brigade during an exercise provides an unfair advantage for the EW unit. However, considering threat doctrine and organization, it is reasonable to assume that a Canadian brigade could well be subjected to the efforts of one EW company, more or less continuously. This could be reinforced by significant EW resources from higher levels of command. If troops are to be exercised realistically, exercise directors should place very few controls over the support that EW provides to the "enemy" commander.
4. The EW tactical HQ of the supporting EW unit, or as a minimum an EW liaison officer, should be deployed to the "enemy" HQ.
5. No control should be placed over the electronic support measure resources of intercept, direction finding and analysis. These resources should be used to test the effectiveness of the friendly force commander's control of emission policy, (the application of electronic silence in varying degrees), transmission security (frequency changing schedules), and call sign allocations, etc. The effectiveness of these plans is assessed through the delay experienced by the EW unit in obtaining and analysing the electronic order of battle for radio, radio relay and radar of the troops being exercised.
6. Electronic support measure resources should be used to intercept, analyse and exploit the breaches of communication security on operating nets. The intelligence output of these resources should be fed directly to the "enemy" HQ. For this to be effective the EW unit should be provided with the essential elements of information required by the commander, as well as access to intelligence obtained from other sources.

7. **Imitative Deception.** Imitative deception should be used to test friendly forces in their alertness to intrusion of their nets by an enemy and their drills for authentication. It should not be necessary to place any controls on the employment of imitative deception by the EW unit, since overuse of this technique quickly negates its effectiveness.

8. **Jamming.** The EW unit should be given a free hand to jam nets which they have intercepted and analysed. They should also be allowed to jam secure nets where the intention is to force the net to change to "in-clear" transmissions so that intercept can be carried out. However, apart from particular phases of the exercise such as a counter-attack, the major training value will be achieved if jamming is continued only long enough to ensure that effective anti-jamming drills are executed. Effective control can be exercised by the Exercise Director, placing a limit on how long any net/radar can be jammed without reference to control HQ.

9. **Deployment of EW Resources.** The intercept and direction finding resources of the EW unit can and should be deployed in their normal relationship to their targets, behind their side of the forward edge of the battle area (FEBA). Because of peacetime restrictions on the power employed by jammers, it will often be necessary to umpire jamming detachments into positions on the opposing side of the FEBA so that they will be as effective as if full jamming power were being employed. This factor needs to be taken into account in exercise planning.

SPECIMEN CONTROL BRIEF

Serial	Exercise Time	Exercise Time Real Time			Exercise Secret DS and Control only	
		Real Time	From	To	Action	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)

SPECIMEN FORECAST OF OPERATIONS

UNIT or FORMATION.....EXERCISE.....(CODENAME)						
DATE OF EXERCISE.....						
Ser	Date	Time	Situation	Probable Action by	Action by umpire	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)
10	9 Aug	1300 hrs approx	Cdn adv checked by rear gds en 10th Bde holding line of River Madawaska from all incl.... to.....	Two courses open to Cdns. a. Force crossing over River Madawaska in vicinity of X. b. Avoid frontal attack on RiverMadawaska posn; and turn posn by thrust to South East of Y.	If a. is followed: (1) depending on the thoroughness of preps, permit penetration of en posn as far as Z; and (2) any undue exposure during recce to be heavily punished during asslt. If b. if followed: (1) since en hold this part of front lightly any well prepared attack should be allowed considerable success; and (2) attack should be held up locally where en centres have not been neutralized by arty fire.	Important that director should know immediately which course 2 Bde Gp proposes to take.

SUGGESTED SCALE FOR THE CONTROL ORGANIZATION IN AN INDOOR EXERCISE OR CPX

1. The function of control is similar in these types of exercise. The fact that communications in an indoor exercise are more comprehensive does not necessarily mean they require more personnel to man them. The organization given below is based on employment of a brigade HQ and three infantry battalion HQs for an exercise lasting 36 hours.

Ser	Title	Number	Remarks
1	Exercise Director	1	Brigade Commander may either command and direct, or direct only. In the latter case an exercise will be detailed from among his subordinates. The best solution is probably for him to command the brigade.
2	Assistant Exercise Director	1	A luxury if Brigade commander directs only. Required otherwise.
3	Chief Controller	1	Deputy to director. Director's link with control staff.
4	Assistant Controller	1	Again a luxury. Really a "stand in" for chief controller.
5	Higher Control	1	If limited to operational matters.
6	Flank Control	Nil	Traffic can be handled by higher control.
7	Lower Control	8	Two for each infantry battalion or armoured regiment. One working at a time.
8	Supporting Arms Control	4	Artillery, signals and engineers all combined. Two working at a time. Supporting arms control must not out-number their equivalents being exercised or latter will become "swamped".
9	Administrative and Logistics Control	2	Combine "AQ" and services. Must liaise closely with lower control to ensure continuity of administrative and logistic traffic.

SPECIMEN UMPIRE'S LOG

Exercise.....Sheet No.....

Name.....Umpiring with.....

Serial	Date	Time hrs.	Detail	Remarks
(a)	(b)	(c)	(d)	(e)
		(Ex and real)	Description of the event.	Detail highlighting points for after action reports.

SUGGESTED SCALES OF UMPIRES - UNIT SYSTEM1. **Units.**

a. Armour	Senior unit umpire	Major
	Assistant to senior unit umpire	Subaltern One officer per squadron
	Pool of umpires	Up to one NCO per troop
b. Engineers	Fire representation parties	One per battery
	Senior unit umpire	Major
	Pool of Umpires	Two officers per squadron
	For independent Squadrons	One NCO per troop add one officer
c. Artillery	Senior unit umpire	Major
	Assistant to senior unit umpire	Officer or WO for technical duties
	Pool of umpires One NCO per battery	One officer per battery
d. Signals	Senior unit umpire	Major
	Assistant to senior unit umpire	Officer or WO for technical duties
	Pool of umpires	One officer per squadron Up to one NCO per troop
e. Infantry	Senior unit umpire	Major
	Assistant to senior unit umpire	An officer
	Pool of umpires	One officer and at least one NCO per company; and One officer or NCO per HQ Coy platoon
f. Service Battalion		One major per lieutenant-colonel's command; One major or captain per company or equivalent; Up to one subaltern or NCO per platoon or equivalent; and If the service battalion is sufficiently concentrated,

it is possible to operate officers as a pool.

2. **Brigade Headquarters.**

Senior umpire lieutenant-colonel;

"SSO OPS" and "SSO ADM" Staff umpires. Four, of whom two should be staff-trained; and

All other umpires are found as in paragraph 1.

3. **Higher Headquarters.**

Senior umpire Colonel or above;

Staff umpires One major, staff trained per operations branch; and One captain. These officers work as a pool.

4. **Support Arms Senior Umpires.**

One lieutenant-colonel or major and one captain or subaltern per Brigadier's Headquarters.

Services HQs and Advisers:

One major per Brigadier/Lieutenant-Colonel's Headquarters.

5. **Transport.**

Umpires with units must have independent transport and radio communications except NCOs, who may travel in unit transport.

6. **Brigade and Higher Headquarters.**

50 per cent of umpires should man their own radio vehicles and remaining vehicles will normally be operated as a pool.

SUGGESTED SCALES OF UMPIRES - POOL SYSTEM

1. The organization of the umpire force is based on the normal chain of command. Each commander therefore, has his own staff and supporting arms to assist him and uses his own officers, transport and radios. In addition, he may require representatives of other arms and services not normally affiliated to his unit.
2. The basic sub-unit of the umpire force is the unit umpire team. This, ideally, consists of:
 - a. Umpire (major or captain) - Jeep fitted with radio
Two driver operators
 - b. Assistant umpire (subaltern or Senior NCO) Driver - Jeep fitted with radio
3. A typical umpire organization for an inter-brigade exercise is:
 - a. **Chief Umpire** - Lieutenant-Colonel
 - b. **Umpire HQ** - Battalion HQ
 - c. **Umpire Force.** Twelve umpire teams from battalion, three umpire teams from the affiliated armoured squadron and artillery battery. Under command, umpire teams from engineers, signals and services as required by setting of exercise.

DO'S AND DON'TS FOR UMPIRES

1. DO'S.

- a. DO keep "in the picture" throughout. If you don't know what the enemy or adjacent units are doing, find out.
- b. DO make certain that the troops understand the picture you are painting. If they do what you think is wrong, it may be because your description of the situation was not clear.
- c. DO be realistic in assessing casualties. Be severe on inaction and carelessness.
- d. DO insist on realistic fire control. If troops have exhausted their ammunition, don't let them continue firing until they are replenished.
- e. DO look ahead and try to foresee what is likely to happen so that you can give a timely decision when needed.
- f. DO consider the fire effect of both sides before you give a decision.
- g. DO be firm. Once you have given a decision, stick to it.
- h. DO halt a movement that you feel is out of control. It is far better to have a brief pause in an exercise than to let actions get out of hand.
- j. DO all that you can to maintain the interest of the troops.
- k. DO keep a proper record of events. If important timings and events are missing, your report will be of little value.
- m. DO send your reports to your senior umpire at the times ordered.
- n. DO get in touch with the umpires of the opposing side before an attack. Unless you know the dispositions and plans of the defenders, you will be unable to arrive at a realistic decision.
- p. DO remember that the value of the exercise very largely depends on you.

2. DON'TS.

- a. DON'T take sides. Your job is to impartially assess the value of fire.

- b. DON'T compromise exercise security by word or deed. Your umpires' forecast of events is "EXERCISE SECRET" and must not be communicated to participating troops.
- c. DON'T give away impending developments, or the presence of a patrol, by conspicuous behaviour or careless exposure on your part. Nothing is more exasperating to troops.
- d. DON'T provide information that would not be available in war. This is bad training and results in incorrect lessons being taught.
- e. DON'T get in the way of commanders or troops any more than is absolutely necessary.
- f. DON'T look at fields of fire from a vehicle. Get down and see them from the level of the actual weapons.
- g. DON'T be bluffed, check up details/reports yourself. Things are not always all they are claimed to be.
- h. DON'T order tactical withdrawals. If the superior commander wants troops to withdraw, he will give the order himself.
- j. DON'T tell formed bodies of troops that they have been taken prisoner.
- k. DON'T dictate to commanders what they should do. They are commanding the troops, not you.
- m. DON'T allow argument, but give reasons. Be tactful.
- n. DON'T leave a situation you are umpiring until either the situation has been cleared up or you have handed over your responsibilities to another umpire.
- p. DON'T make unnecessary personal demands on the administrative resources of a unit.
- q. DON'T follow the commander around like a reporter.
- r. DON'T gloat over troubles which lie ahead.
- s. DON'T be critically wise after the event.
- t. DON'T harass commanders and staffs with questions at particularly busy times.

**SUGGESTED PROGRAMME FOR TWO-DAY UMPIRING COURSE FOR OFFICERS
AND SENIOR NCOs**

1. It is most important that umpires taking part in exercises attend standardization training. Nuclear umpires should attend a two-day nuclear umpire course covering nuclear tactics, weapons effects and the characteristics of nuclear delivery means, as well as the details of the umpire methods to be adopted.

Day and Period	Subject	Ref. to Manuals	Remarks
Day 1- AM			
1	LECTURE - The Umpire's job; principles of umpiring.		Periods of 45 minutes each.
2	LECTURE - Umpire organization and neutral signals. Umpire's logs and reports.		
3 and 4	LECTURE and DEMONSTRATION - Characteristics and effects of weapons. Method of representation of fire. Training expedients.		
Day 1 - PM			
5 and 6	DEMONSTRATION - Method of "picture painting" and control: (a) the wrong way, and (b) the right way.		Two platoons required: one attacking, the other defending. Running commentary (with loud speaker equipment if available). Stores required - blank ammunition, thunderflashes, white flags.
7	LECTURE - Umpiring with aircraft and armoured fighting vehicles.		The action of the troops and their reactions to the methods employed by the umpires must be carefully rehearsed beforehand.
8	LECTURE and DEMONSTRATION - Umpiring gas.		Stores required -

			thunderflashes; generators, lachrymatory; bombs, grounds, training, mines, chemical, training; marked umpires' spray detectors, etc.
Day 2 - AM			
9	LECTURE - Umpiring skeleton exercises and one-sided exercises with troops.		
10	LECTURE - Administration umpiring; disposal of casualties.		

Day and Period	Subject	Ref. to Manuals	Remarks
Day 2 - PM			
11 to 16	TEWT - Practical umpiring exercise.		Based on a recent exercise in which the formation or unit took part. The situation should be gone through in detail on the ground from the point of view of the umpires. Some situations should be stages in close country and built-up areas.

TABLES TO ASSIST STAFF OFFICERS IN DETAILING CONTROL AND UMPIRE STAFFS

Ser	Appoin tment	Arm	Rank (and name if known)	Who provides	Who to report to and who to work with	When to report and where	Vehicle allotted and pro- vided by	Radios allotted	What reconnaisan ce and conferences to attend
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
1	Senior umpire	Inf	LCol (Smith)	1 RCR	Comd 2 Inf Bde Gp	061700 May GR431 228	Jeep equipped with two radios	Two vehicle radios and one manpack	Chief Umpire's conference. 260900 Apr GR190642

AIDE MEMOIRE FOR UMPIRES

OGPs

Did all arrive on time? Traces marked?

Or orders at all levels? (Mission Clear?)

Check traces at all levels. (Consistent?)

Was Int passed down?

Were orders just repeated or made to fit the level?

BATTLE PROCEDURE

Warning orders passed?

Traces sent back?

Time Estimate?

Recce plan made?

Recce efficient?

Warning Order expanded/confirmed?

Preliminary action by tps effective?

Deployment smooth?

USE OF GROUND

All aval cover used?

Use of dead grd, contours, low grd?

Scouts used?

Silhouetting?

Correct fmns?

BATTLECRAFT/TACTICS

Ldrs suspicious, crafty and alert?

Did ldrs anticipate?

Altn plans?

Coy bases secure? (Sentries?)

Cam?

Fast reaction?

SITREPs?

INFORMATION

Passed back quickly? (Negative info?)

Sits developed to acquire info?

PWs searched, segregated, guarded?

FITNESS

Tps fit?

LEADERSHIP

Decisive?

Did tps respond?

Flexible?

CASUALTIES

Treated properly?

Check MAs bags.

Cas evac smooth?

NIGHT

Noise?

Lights?

Sentries?

Navigation?

Fmns used?

COMMUNICATIONS

Voice Procedure?

Security - Codes?

RRBs, radio relay effective?

COMMAND POSTS

Good routine?

Info current?

Good briefings?

Con eff ?

Cam, concealment, security?

Good loc for comms?

PATROLS

Clr orders? Password?

Preps complete/rehearsals?

Action on encounter with en?

Cas?

Re-entry procedure cir?

Ops

Obsn arc covered?

Altn and secondary posns?

Cam, concealment?

Right eqpt? (Back-up comms?)

Range Card?

Open fire policy?

Plans for ni?

OP base?

AIR

Good emplaning/deplaning drills?

Org of LZ?

Hels fly tactically?

Air Request format?

Initial depl?

TRAINING DURING OPERATIONS

HISTORICAL EXAMPLE

To All Formation Commanders
2nd Canadian Corps

1. Occasionally it may be possible to withdraw formations or units from contact for short periods of rest. In the present stage of the war in general and the campaign in Normandy in particular, I cannot guarantee how long or how frequent such periods of rest may be. When opportunities occur, it is of great importance that troops should derive the utmost benefit from periods out of contact and the following notes are intended for guidance of commanders and commanding officers.
2. During rest periods there are three objectives which must be attained.
 - a. **Enhance Morale.** During periods of close contact the standards of personal cleanliness, feeding and physical well-being tend to deteriorate. Troops also tend to contract a mental inertia. The combination of danger, monotony and poor living conditions during less active periods in close contact can have a deleterious effect on fighting spirit. The primary objective of all measures must be to restore to the highest possible level, physical and mental well-being and alertness.
 - b. **Reorganization, Proper Absorption of Reinforcement Personnel.** When strengths of units include a high proportion of reinforcements, sub-units lack esprit de corps and there is a loss of the cohesion characteristic of a well-drilled battle team. The re-posting of officers, new NCOs and specialists, and reorganization of battle teams can best be done when troops are free to re-train.
 - c. **Training.** The re-training and welding of sub-units into battle teams. Thorough analysis, study and absorption of the lessons learned from operations and the exchange of ideas between officers and NCOs. Study problems in connection with probable future operations.
3. **Enhancing Morale.** "Rest" will not be interpreted as leaving the soldier to himself to do nothing or as time for relaxation of discipline and indulgence in licence. Actually it is the strain of being under fire in forward areas and the drain of physical strength without having enough to fully occupy the soldier's mind, from which the troops suffer most during long but comparatively inactive periods of contact. The following measures will be included during rest periods:
 - a. The first twenty-four hours out of the line, the soldier should be left to himself to write his letters, sort out his kit, get himself clean and have a really good sleep.

- b. After the first twenty-four hours a proper daily routine must be instituted which will fill the soldier's day. Firstly, meticulous attention will be given to the details of discipline, smartening-up and physical training. Remember the golden rule for the disciplinarian "Look after the little things and the big things will look after themselves."
- c. Officers' and sergeants' messes should be re-formed on a regimental basis; when reinforcement officers and new NCOs have to be absorbed, tremendous value is obtained from contacts in regimental messes.
- d. Each day commanding officers should have all their officers together for an hour and advantage should be taken of this time to pass down through the unit the regimental outlook and spirit which the commanding officer wishes to be carried throughout the battle. Tactical discussions and TEWTs should also be included in this period.
- e. For at least one hour every day, platoon and equivalent commanders should be able to have all their men together for instruction on such matter as discipline, care of weapons, regimental customs, traditions; the progress of the war; the war in the air and how the RAF has assisted operations on the ground; the part the division has played in its operations; where and how the sub-unit plays its part in the war effort as a whole; the relation of the soldier to the civilian population of occupied countries and the importance of proper conduct in relation to the local inhabitants. All these subjects should be taught at the platoon level and instruction of this type is one of the best opportunities offered to the platoon commander to "sell himself" to his men.
- f. Organized games and sports are of tremendous value and all should be able to participate in these.
- g. Properly organized sight-seeing parties in charge of an officer may be taken on conducted tours of places of interest, but individual officers or soldiers will not be permitted "on pass" in local towns. Much value can be derived by "exchange visits" between units to places where actions have taken place, an officer who took part describing the battle and conducting the tour. Entertainment will be arranged within units - concerts should be organized, bands will be available as will the facilities of Auxiliary Services. Properly organized unit canteens may be instituted when this is practicable. Drinking by soldiers in their bivouac lines will not be countenanced. This requires careful checking when stocks of local wines are obtainable.
- h. As far as operational requirements permit, individuals or small groups should arrange exchange visits between Allied regiments of the British Army or visits to the Royal Navy or Royal Air Force.

4. Training should be concentrated on the section, platoon and company level. These are the sub-units which suffer most by dilution as a result of wastage. Battle teams must be reorganized, trained and rebuilt on the nucleus of experienced personnel. Particular attention must be given to the care and handling of weapons.

5. Training with the troops should not be attempted above the unit level, and only above the company level when time permits, but each HQ should set its house in order as a result of its battle experiences. Formations should organize officers' discussions on the lessons learned during operations and pool their knowledge and experience for the benefit of all.

6. When troops can be collected together, I wish to visit them myself and have an opportunity personally to congratulate them and show them how their achievements have played their part in the bigger strategical conceptions of the present campaign.

Main Headquarters
2nd Canadian Corps
30th July 1944

(GG Simonds)
Lieutenant-General
GOC 2nd Canadian Corps

RULES GOVERNING THE TREATMENT OF PRISONERS CAPTURED DURING COMBAT SURVIVAL TRAINING EXERCISES

AIM

1. The aim of these rules is to codify the treatment and handling of exercise prisoners of war from the time of their capture to the time they are handed over to a centre for interrogation, or released.
2. In general, capturing forces should endeavour to create as realistic an atmosphere as possible; prisoners are to be treated correctly, as an enemy would be in time of war. The general rules are laid down in paragraphs 5 to 12, indicating the treatment likely to be received by prisoners captured by an enemy who may or may not pay due regard to the conditions of the Geneva Conventions.

PRISONER HANDLING

3. **Movement of Prisoners.** Prisoners are to be moved from the capture point to a centre for interrogation as quickly as possible.
4. **Prisoner Detention Point.** A prisoner of war detention point may be established to facilitate collection and movement of PWs back to the centre for interrogation. Prisoner detention points are to be operated under the rules laid down in paragraphs 5 to 12.

TREATMENT OF PRISONERS

5. Prisoners are not to be made to suffer any physical indignity nor handled in any way except for the purpose of searching and guiding them.
6. Prisoners are not to be made to adopt any stress positions. They may be made to lean forward against an object or lie face down while they are being searched. They may be made to stand or sit with their hands on their heads provided that they are not kept in either of these positions for so long that severe physical discomfort is caused.
7. Prisoners may be searched only when the exercise rules specifically allow this and then, only to remove from them any weapons, documents (except individual identification papers) or aids to escape and evasion. Money will not be taken from the prisoners. Any retained equipment must be placed in a suitable container clearly labelled with the prisoner's name and rank and is to be handed over to the centre for interrogation guards by the prisoner's escort. The prisoner is to be given a receipt for the equipment seized. Prisoners may be ordered to remove all clothing for searching, except when weather conditions are extreme.
8. Providing that they are not being moved on foot, prisoners' boots or socks and boot laces may be removed to discourage escape.

9. Prisoners will not be given cigarettes, food or water by the prisoners' escort nor anyone else. At the same time, the commander of the capturing force is to ensure that all prisoners are given a drink of water at least every six hours within the first twenty-four hours and a plain meal within twelve hours of capture. If the transfer of prisoners takes longer than twenty-four hours, sufficient food shall be provided. These times are to be regarded as the maximum and must be reduced if severe climatic or environmental conditions exist.

10. Prisoners will not be allowed to talk among themselves.

11. Prisoners will be segregated into groups, ie officers, non commissioned officers, privates, civilians, females and, if identifiable as such, deserters and political indoctrination personnel.

12. When a prisoner is handed over to a centre for interrogation, a capture note is to be handed over to the guard; this should include the following information:

- a. name, rank, serial number and date of birth of the prisoner;
- b. date, time and location of capture;
- c. any other information that may be of value to Intelligence; and
- d. whether given food and/or drink since capture; if so, when.

RESPONSIBILITY

13. The Exercise Director is responsible for the strict adherence to the spirit and the letter of the rules contained in this annex by all forces engaged on the exercise.

RULES GOVERNING THE INTERROGATION PHASE OF COMBAT SURVIVAL TRAINING EXERCISES

AIM

1. The aim of these rules is to codify the treatment and handling of prisoners while in a centre for interrogation.
2. The aim of the interrogation phase is to teach the methods of resisting and defeating the subtleties of interrogation, persuasion and intimidation by giving practical experience of the treatment which prisoners of war might possibly have to withstand shortly after capture by an enemy.
3. **Officer Commanding, Centre for Interrogation.** The officer commanding a centre for interrogation is responsible for the strict adherence to the spirit and the letter of the rules contained in this annex and is to ensure that all interrogators who take part are qualified personnel.
4. **Neutral Umpires and Medical Officers.**
 - a. To assist the officer commanding a centre for interrogation in ensuring that there is compliance with the rules contained in paragraphs 6 to 15, a neutral umpire and a neutral medical officer will be present at the centre throughout the interrogation phase of the exercise. The medical officer is to have been made aware of the psychiatric implications of interrogation.
 - b. The medical officer is to take a positive interest in each prisoner on arrival at the centre for interrogation and is to have access to prisoners at any time he thinks necessary.
 - c. As a minimum, a second medical officer, who should be from one of the units being exercised, is to be present at the centre to relieve the neutral medical officer. For the purposes of the exercise, the neutral medical officer is to be regarded as the senior.
 - d. Umpires and medical officers are never to be impersonated.
 - e. Any request by a prisoner to see an umpire or medical officer is to be granted immediately. On the advice of the umpire or medical officer, a prisoner's request to opt out of the exercise is to be granted.

- f. The neutral medical officer is to check carefully that no prisoner is likely to suffer physical injury from lack of water, food, sleep, warmth, or from solitary confinement, or in any other way. He is also to watch and guard against any mental ill-effects due to prolonged questioning or confinement. Umpires and medical officers have authority to withdraw individuals from further interrogation at their discretion. Full details are to be given to the officer commanding the interrogation centre for the information of the Exercise Director.

5. **Unit Commanders.** Unit Commanders are to ensure that participants from their units are told prior to the exercise that should they be captured:

- a. They will be treated as prisoners of war and every effort will be made to simulate the harsh and uncomfortable conditions which they might have to withstand after capture by an unscrupulous enemy.
- b. Every effort will be made to extract information from them by questioning and by all forms of trickery, impersonation, intimidation, insinuation, pretended kindness or lies.
- c. There will be an umpire and a neutral medical officer always available to them at the centre for interrogation. These two persons will not be impersonated and they may therefore talk freely to them.

TREATMENT OF PRISONERS

6. Prisoners are not to be made to suffer any physical indignity nor touched in any way except for the purpose of searching them and/or guiding them when blindfolded.
7. Prisoners are to be blindfolded by means of a cloth tied loosely over their eyes. Medical officers are to pay particular attention that these are not left on too long.
8. Prisoners are not to be confined in stocks or kennels or in any position where their movement is severely restricted. The use of handcuffs is permitted only when other forms of restraint are not available and provided that it does not cause physical strain.
9. Prisoners are not to be made to adopt any stress positions. They may be made to lean forward against an object or lie face down while they are being searched. They may be made to stand with their hands in front of them against a wall, or made to stand or sit with their hands on their heads, providing that they are not kept in either of these positions for so long that severe physical discomfort is caused.
10. Prisoners may be ordered to remove clothing for searches. Any personal possessions, food, water, some outer clothing and boots may be withheld after search. The prisoner is to be given a receipt for the equipment seized. All personal possessions and clothing are to be returned to prisoners before they leave the centre for interrogation.

11. Except during searches, prisoners are to retain socks or boots without laces, underclothing, trousers and shirt, or may be issued with alternative clothing in lieu.
12. No prisoner is to be kept at the centre for interrogation longer than twenty-four hours from the time of his arrival there and of this no more than eight hours is to be spent on actual interrogation.
13. Every prisoner is to receive as a minimum one meal of bread within twelve hours of arrival at the centre for interrogation, and water at least every six hours. If it is to be expected that the prisoner's state of health will suffer, or that his well-being will be considerably impaired, sufficient food shall be provided.
14. The use of music rooms is permitted providing the noise level has been checked and approved by the responsible medical officer.
15. Should the exercise scenario include the processing of females as prisoners the same general provisions will apply, except that physical searching of a female must be done by a female. Any interrogation centre must have a female staff to handle female prisoners.

WITHDRAWAL FROM THE EXERCISE

16. The officer commanding a centre for interrogation is to withdraw trainees when any of the following criteria are satisfied:
 - a. the trainee has been in the centre for interrogation for the prescribed time;
 - b. on the advice of the medical officer;
 - c. when the trainee's request to opt has been granted (see paragraph 4e);
 - d. when the trainee is so fatigued that he is no longer alert enough to derive benefit from further participation in the exercise; or
 - e. when the trainee's defences have crumbled so far that it is no longer in his interest to retain him in the exercise.

RECORDS

17. The officer commanding a centre for interrogation is to ensure that detailed records are maintained on the treatment of every prisoner. These records are, whenever possible, to include a tape recording of every interrogation. These tape recordings are to be kept for a minimum of two months.

RESTORATIVE TREATMENT

18. The Exercise Director is to ensure that a hot drink and food is available to each evader or prisoner as he finishes the exercise.

DEBRIEFING

19. The officer commanding a centre for interrogation is to ensure that all prisoners who have been interrogated are debriefed by an officer competent to do so on their conduct in the centre for interrogation.