PLANS, ORDERS, ANNEXES, AND SYMBOLOGY
GENERAL:

1. **Learning Objectives**: After completing this subcourse you will be able to:
   - Describe the plans, orders, annexes, and symbology available to the commander.
   - Identify the types of combat orders.
   - Describe the operation plan and order.
   - Describe the techniques and considerations used to prepare an operation plan or order.
   - Identify the purpose and the format used in the preparation of selected annexes and appendices to operation plans and orders.
   - Identify military symbols, graphics, and appropriate overlay techniques used to support military plans and orders.
   - Depict military symbols and graphics.
   - Identify appropriate overlay techniques used to support military plans and orders.

2. **Lessons**: There are two lessons in this subcourse:
   - Plans, Orders, and Annexes.
   - Military Symbols, Graphics, and Overlay Techniques.

3. **Subcourse Prerequisites**: None.
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**SUBCOURSE IS 7004 - PLANS, ORDERS, ANNEXES, AND SYMBOLOGY**

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Use the extracts in the Appendix to take this subcourse. These extracts may not be the most current. At the time this subcourse was written, these were the most current. In your own work situation, always refer to the latest publications.

The words "he," "his," and "men," when used in this subcourse, represent both the masculine and feminine genders, unless specifically stated.
*** IMPORTANT NOTICE ***

THE PASSING SCORE FOR ALL ACCP MATERIAL IS NOW 70%.

PLEASE DISREGARD ALL REFERENCES TO THE 75% REQUIREMENT.
LESSON 1

PLANS, ORDERS, AND ANNEXES

INTRODUCTION

TASK DESCRIPTION:

Upon completion of this lesson, you will be able to identify the various plans, orders, and annexes available to the commander.

TASK

Identify the plans, orders, and annexes available to the commander.

CONDITIONS

Given information on plans, orders, and annexes.

STANDARDS

Demonstrate an understanding of the task by correctly answering 80% of the multiple-choice questions.

REFERENCES

FM 101-5, Staff Organization and Operations.
LESSON 1

PLANS, ORDERS, AND ANNEXES

OVERVIEW

The purpose of this lesson is to teach you to identify the plans, orders, and annexes available to the commander. In the first lesson you will learn to identify the types of combat orders; you will also be able to describe the operation plan and order. In the second learning event you will learn to describe the techniques and considerations used to prepare an operation plan or order. After reading the third learning event, you will be able to identify the purpose and format used in the preparation of selected annexes and appendices to operation plans and orders.

LEARNING EVENT 1

PLANS AND ORDERS AVAILABLE TO THE COMMANDER

"The success of military operations depends largely upon the orders issued. The best of plans, the most skillful combinations, may fail if the commander or his officers cannot express them properly."

Von Kiesling

The most important skill that a military commander must possess is the ability to issue orders that are clear, concise, and timely. He must be able to convey his intentions so that they are understood clearly and in time for the subordinates to take action.

Von Kiesling stated the above quote over half a century ago, yet his words are still powerful. Commanders today must be capable of directing the mighty array of men and machinery on the modern battlefield.

We will look at combat plans and orders. In future assignments you will be called upon frequently to make decisions. Those decisions may be meaningless unless you relay them to your subordinates in terms of clear, concise, and timely plans or orders.

The techniques, procedures, and terminology that will be introduced will aid you in the preparation of plans and orders. It will also provide you with a military language that is common throughout NATO. The five paragraphs of the operation order or plan and the other conventions that we use serve as the military's own professional language. Because of the standardization that has taken place, a brief array of words or symbols can serve as a common point of understanding between military personnel, regardless of national origin. First, we will look at the different types of combat orders.
Types of Combat Orders

Combat orders pertain to strategic, operational, or tactical operations, and attendant combat service support in the field. They may be issued initially as a plan, to become an order at some future time. They are classified as the following:

- Directives.
- Letters of instruction.
- Operation orders.
- Administration/logistics orders.
- Warning orders.
- Standing operating procedures.
- Fragmentary orders.

Directives. A directive is an oral or written military communication establishing a policy or ordering a specific action. Broadly speaking, a directive is any communication which initiates or governs action, conduct, or procedure. It is a general term that includes all the various forms of orders and instructions, in connection with policies, or strategic plans directly by theater or higher commanders.

Letters of Instruction. A letter of instruction is a form of order by which higher commanders give information as to broad aims, policies, and strategic plans for operations in large geographic areas over long periods of time. A letter of instruction provides guidance and control for the operations of large commands such as theater army, army, or joint task forces. It normally deals with the broad aspects and phases of operations. The details are determined by the recipient. A letter of instruction usually follows the sequence of the five-paragraph operation order. However, any form may be used.

Operation Orders (OPORD). These orders provide for coordinated action to carry out the decision of the commander to conduct an operation. The preparation and dissemination of the operation order is a primary coordinating staff responsibility of G3/S3. The term "operation order" includes tactical movement orders (Standardization Agreement [STANAG] 2041). Combat Service Support (CSS) commanders also use operation orders to Task their units. Unlike the directive or letter of instruction, a complete operation order is issued in a prescribed form. We will discuss the operation order in greater detail later in this subcourse.

Administrative/Logistics Orders. These orders provide for coordinated CSS of a combat operation or maneuver. Its preparation is the primary coordinating staff responsibility of the G4/S4. A complete administrative/logistics order, like a complete operation order, is issued in a prescribed form.

Warning Orders. Warning orders are appropriate at all levels of command whenever time or energy can be saved through their use. These orders give preliminary notice of actions or orders that are to follow. Such
advanced warning lends time to make the necessary preparations. A warning order may be issued by either a coordinating or special staff officer, if the order falls within his area of delegated authority. It has no prescribed form.

Standing Operating Procedures (SOPs). Standing operating procedures are combat orders concerning matters which are of a recurring, routine nature. They prescribe definite or standardized procedures. Examples include troop safety matters, methods of reporting unit locations, measures for handling captured personnel or equipment, distribution of supplies, and standard communication procedures for exercising command and control. Such items are constants in what is otherwise a dynamically changing set of circumstances. Since the SOP is a standing order, that which is stated need not be repeated in the order unless emphasis is desired. Thus, SOPs reduce the number, length, and frequency of other orders. Preparation, publication, and dissemination of the command SOP is primarily a coordinating staff responsibility of the G3/S3. While there is no prescribed form, the SOPs of subordinate units should follow the form of the next higher headquarters' SOP.

Fragmentary Orders (FRAGO). Fragmentary orders are extracts from more detailed operation orders, or changes to previous operation orders. Like warning orders, they are usually brief oral or written messages. Such orders provide instructions as they are developed. They provide specific instructions to commanders who do not require the complete order, or they often provide timely change to existing operation orders, FRAGOs are prepared and issued by either coordinating or special staff officers on command approval. They have no prescribed form, although some units in the field use the five-paragraph format, which is optional.

The Process Used to Develop a Combat Plan or Order

Planning is a continuous process in preparation for future assigned or assumed tasks. Planning is essential. It involves a detailed and systematic examination of all aspects of contemplated operations. Planning and preparing plans are essential elements of the military decision making process. Planning makes future operations easier by permitting subsequent, rapid, and coordinated action by the staff and by other elements of the command. It also keeps subordinate elements of the command informed of possible requirements and keeps the command in a better position to respond to rapidly changing situations. Adequate, practical planning is essential to the success of any military undertaking. Proper planning permits the detailed and systematic examination of all factors involved in an operation. The larger the unit, the greater the need to foresee and plan for long-range future operations.

The staff continually plans for future operations. The extent of this planning varies with the level of command. At higher levels, staffs normally prepare for operations from one to several months ahead. At
lower levels, staffs are concerned primarily with short-range planning. In planning, each staff member considers those features of the operation that are in his area of interest. He examines the effects of these features on unit operations and on the plans of other staff sections. Normally, he prepares the plans that are in his area of staff responsibility. Now that we have considered the process used to develop a combat plan or order, let us more closely examine the operation plan and order.

Operation Plans and Orders

Operation and administrative/logistics plans and orders are used by commanders to convey information and instructions to subordinate units. Plans and orders are similar in content and format. A plan may be effective immediately for planning purposes or for specified preparatory action; however, it is not executed until directed by the commander. A plan becomes an order when execution is directed. An order requires immediate execution at a specified time or date.

The major difference between a plan and an order is that a plan normally contains assumptions. The plan also will specify the time or conditions under which it is to be placed in effect.

Plans. A plan is a method or scheme for a military action. It is a proposal to carry out a command decision or project. As part of the planning process, a plan represents the command's preparation in a specific area to meet a particular event. A plan may be written or oral. Although plans are based on specific conditions or assumptions, they are not static. Plans are changed, refined, and updated as a result of continuing estimates and studies. The type of plan that we are most concerned with in this subcourse is the Operation Plan (OPLAN).

The OPLAN. The operation plan is for a military operation. It covers a single operation or a series of connected operations to be carried out simultaneously or in succession. It implements operations derived from the campaign plan. An example of an OPLAN format is found on page 93-103 of this subcourse. Turn to page 93 and familiarize yourself with this Basic Plan Format. Then, continue on in the learning event. When the time and/or conditions under which the plan is to be placed in effect occur, the plan becomes an Operation Order (OPORD). The format is readily adaptable to various types of annexes to combat plans or orders. Annexes to combat plans or orders will be covered later in this subcourse.

Characteristics. The essential elements of a plan are a definite course of action and a method for execution. A good plan has the following characteristics:

- It provides for accomplishing the mission. This is the objective of all planning.
It is based on facts and valid assumptions. All pertinent data has been considered for its accuracy, and assumptions have been reduced to a minimum.

It provides for the use of existing resources. These include resources organic to the organization and those available from higher headquarters.

It provides for the necessary organization. It clearly establishes relationships and fixes responsibilities.

It provides for personnel, materiel, and other arrangements for the full period of the contemplated operation.

It provides for decentralization. It delegates authority to the maximum extent consistent with the necessary control.

It provides for direct contact, permitting coordination during execution between all levels.

It is simple. It reduces all essential elements to their simplest form and eliminates those elements not essential to successful action. A good plan also eliminates all possibilities for misunderstanding.

It is flexible. It leaves room for adjustments because of operating conditions and, where necessary, stipulates alternate courses of action.

It provides for control. Adequate means exist, or have been provided for, to carry out the plan according to the commander's intent.

It is coordinated. All elements fit together, control measures are complete and understandable, and mutual support requirements are identified and provided for.

Now that we have covered the operation plan and the characteristics of a good plan, let us now consider orders.

Orders. Combat orders may be written or oral. If oral, they are normally confirmed in writing at division or higher level as soon as possible.

As previously stated, combat orders may be published as complete orders, or they may be issued in fragmentary form. A complete order, as the name implies, covers all essential aspects and phases of the operation. A fragmentary order provides brief, specific, and timely instructions without loss of clarity.
Characteristics. Characteristics of a good combat order include the following:

- Clarity.
- Completeness.
- Brevity.
- Recognition of subordinate commanders' prerogatives.
- Use of the affirmative form.
- Avoidance of qualified directives.
- Authoritative expression.
- Timeliness.

Keeping these characteristics in mind, next we will discuss the operation order in detail.

Operation Order (OPORD). The operation order is the formal document by which the commander tells his subordinates what they must do to execute his decision and concept. It includes sufficient detail, without reducing the prerogative of subordinate commanders. Their purpose is to ensure that the actions of subordinate units will conform to the plan of operations as a whole.

The form in which a complete operation will be issued has been made the subject of Standardized Agreement (STANAG) 2014 among the NATO nations. We will discuss this form in considerable detail.

Primary staff responsibility for the preparation, coordination, and dissemination of the OPORD is assigned to the assistance chief of staff, G3, at division and higher, and to the operations officer, S3, at battalion and brigade. The G3/S3 prepares the OPORD to comply with the commander's decision and his concept of the operation. He is assisted by other members of the staff. Once the commander has announced his decision on the course of action to accomplish the mission, the G3/S3 must translate the decision to the organization. As a brief summary then, the operation order includes the following:

- Is an order that provides for coordinated action to carry out the decision of a commander on the conduct of an operation.
- Is issued in a prescribed format.
- Is prepared and coordinated by G3/S3 staff.

Summary

An important skill that a military commander must possess is the ability to issue orders that are clear, concise, and timely. He must be able to convey his intentions so that they are timely and understood clearly by his subordinates.
There are different types of combat orders. Combat orders pertain to strategic, operation, or tactical operations, and attendant combat service support in the field. They are classified as the following:

- Directives.
- Letters of instruction.
- Operation orders.
- Administration/logistics orders.
- Warning orders.
- Standing operating procedures.
- Fragmentary orders.

Operation and administrative/logistics plans and orders are used by the commander to convey information and instructions to subordinate units. Plans and orders are similar in content and format. A plan becomes an order when execution of the plan is directed. An order requires immediate execution at a specified time or date.

The Operation Plan (OPLAN) is a method or scheme for a military operation. It covers a single operation or a series of connected operations to be carried-out simultaneously or in succession.

The Operation Order (OPORD) is the formal document by which the commander tells his subordinates what they must do to carry-out his decision and concept. Their purpose is to ensure that the actions of subordinate units will conform to the plan of operations as a whole.
Now that you have completed that first learning event, test yourself with these review questions. Check your answers against the feedback section. Refer back to the learning event if you have any questions.

1. Of the various types of combat orders, which type are extracts from more detailed operation orders, or changes to previous operation orders?
   a. Fragmentary orders.
   b. Operation orders.
   c. Administrative/logistics orders.
   d. Warning orders.

2. Of the various types of combat orders, which type provides for coordinated action to carry out the decision of the commander to conduct an operation?
   a. Fragmentary orders.
   b. Operation orders.
   c. Administrative/logistics orders.
   d. Warning orders.
1. Answer a is correct.

Answer a is correct. Fragmentary orders are extracts from more detailed operation orders, or changes to previous operation orders.

Answer b is incorrect. Operation orders provide for coordinated action to carry out the decision of the commander to conduct an operation.

Answer c is incorrect. Administrative/logistics orders provide for coordinated combat service support of a combat operation or maneuver.

Answer d is incorrect. Warning orders give preliminary notice of actions or orders that are to follow. Such advanced warning lends time to make the necessary preparations.

2. Answer b is correct.

Answer a is incorrect. Fragmentary orders are extracts from more detailed operation orders, or changes to previous operation orders. They are usually brief oral or written messages.

Answer b is correct. Operation orders provide for coordinated action to carry out the decision of the commander to conduct an operation.

Answer c is incorrect. Administrative/logistics orders provide for coordinated combat service support of a combat operation or maneuver.

Answer d is incorrect. Warning orders give preliminary notice of actions or orders that are to follow. Such advanced warning lends time to make the necessary preparations.
LEARNING EVENT 2

PREPARING AN OPERATION PLAN/ORDER - THE COMMAND ESTIMATE

In the first learning event you were introduced to operation plans and orders. Before looking more closely at the operation order, we will consider the planning sequence required to develop plans and orders.

The Command Estimate Process

The management of information is vital to any estimate process. The collection, analysis, and distribution of information is a continuous staff requirement. All information analyzed is exchanged among staff sections and used to update situation statuses. Such staff interaction emphasizes information that may assist the commander in making new decisions. The principal staff officer uses the results to update his knowledge of the situation and each must be able to identify and focus on the information the commander needs to successfully execute combat operations. The command estimate focuses on that information and how it must be processed to solve war fighting problems. The elements of the command estimate include the following:

- Mission.
- Mission analysis.
- Commander's guidance.
- Facts.
- Assumptions.
- Deductions.
- Analysis.
- Decision.
- Action and orders.
- Supervision.

While the above elements may appear to be separate entities, they are not independent. The estimate is not a cut-and-dry process. Based on the situation, all elements can occur simultaneously.

Staff officers must be able to act on information derived from formal or informal staff estimates, as well as information from units and intelligence sources. To make it work, staff officers must:

- Follow the cycle of the estimate.
- Collect information that continuously updates the estimates.
- Focus information requirements on enemy and friendly information needed for decisionmaking.

The command estimate is a continuous process (see Figure 1). The solid arrow in Figure 1 indicates just that. The receipt of a new mission only provides new direction to this continuous process for that particular operation. The three basic elements of mission, mission analysis, and commander's guidance identify the mission and the parameters under which the unit will accomplish the mission. We will
discuss each element of the command estimate in detail. Refer back to Figure 1 as each element is examined. Figure 1 depicts how the individual elements of the command estimate fit together as a whole.

**FIGURE 1. THE COMMAND ESTIMATE**

Element 1: MISSION

The mission is assigned by higher headquarters. It may be assigned one of two ways; through an order or plan for a new operation or by a change to a current operation. The mission might also be deduced by the commander or staff as a result of ongoing operations, or from analysis of the higher headquarters order or plan.
Once the mission is received, the following actions are taken to prepare for mission analysis:

- The chief of staff and other staff principals are alerted.
- The commander provides information to the staff.

Element 2: MISSION ANALYSIS

The second element of the command estimate is the analysis of planning time. Once the chief of staff receives the mission, he organizes the staff to analyze it. He indicates where and when he will be briefed on the results of the analysis.

Upon receipt of the chief's guidance, the staff will conduct mission analysis. The major goal of mission analysis is to determine specified and implied tasks and identifies any constraints or restraints. The staff must continuously identify and update information requirements according to the new mission. The staff considers all relevant information carefully and works closely to identify essential tasks. The G3 should develop a preliminary mission statement.

The commander may conduct an independent mission analysis at this time, using information provided by his staff and higher commander.

The analysis of time is an essential portion of mission analysis. Such analysis identifies the amount of time available and begins the process of allocating that time to the various portions of the estimate process. The amount of planning time available is identified. It is important to note that planning time for a given headquarters should not exceed 1/3 the total planning time available. As a result of time analysis, the chief of staff may adjust his guidance on how much time the staff has for mission analysis.

So who is responsible for what, at this point? First of all, the chief of staff is briefed on the results of mission analysis. The staff focuses only on essential information required to make a synergistic decision.

Secondary, the chief of staff and staff brief the commander on the results of the mission analysis and provide the preliminary mission statement.

Finally, the commander may provide the staff with additional information from his own mission analysis which he finds necessary to complete the command estimate. Such information might modify the results of the staff analysis. The commander then approves the results and restates the mission. The restated mission is for planning purposes only and is subject to modification during the remainder of the estimate. He then provides his initial planning guidance.

It is important to note that, in time-critical situations, the commander may have to conduct his mission analysis without input from the staff.
In such a situation he must rely on his own experience and knowledge and proceed directly to Actions and Orders (refer to Figure 1).

Element 3: COMMANDER'S GUIDANCE

The third element of the estimate process is the commander's guidance, which includes the warning notice. The amount and type of guidance given by the commander depends on his perception of the operation in question and his evaluation of his staff's capabilities. At the minimum, guidance should include clarification of the interest of the commanders one and two levels up. It should also include a statement of his intent and the time and place the order will be issued.

The statement of intent can be modified anytime during the estimate until the decision has been made by the commander.

The commander may be more complete in his instructions by defining the latitude the staff has in developing courses of action. He may wish to comment on any of the constraints identified during mission analysis. Such detailed instructions may include any of the following:

- Guidance on specific courses of action.
- Preliminary guidance for use of nuclear and chemical weapons.
- Preliminary guidance on time.
- Where risk may be acceptable to ensure mission accomplishment.
- Command and control arrangements.
- Specific guidance on any portion of the battlefield.
- Assumptions.
- Type of reserve.
- Critical events to be looked at.
- Combat service support instructions.

The commander provides and updates his guidance as needed, either to specific staff officers or to the chief of staff. In any event, the chief of staff is always informed of changes to the commander's guidance.

Warning Notice. The G3 will issue a warning notice once the commander approves the mission analysis and issues his restated mission and guidance. The purpose of the warning notice is to inform the commander of a pending operation with the understanding that more information follows in a warning order after the course of action has been selected. The warning notice is sent to all subordinate units, affected adjacent units, and to the higher headquarters if the mission was deduced.

Once the mission is determined and the commander's guidance is received, the staff must develop the situation by collecting information to update their own staff estimates. This is done only if there is enough time and information for the next three elements of the command estimate; facts, assumptions, and deductions.
Element 4: FACTS

For this element, entitled Facts, the staff gathers all pertinent information on which to base their recommendations to the commander. These facts include the following:

- Terrain/Weather.
- Known Enemy Information.
- Time.
- Status of Own Forces/Known Friendly Information.

Terrain. The G2 and G3 are responsible for identifying the battle area. Such analysis includes the area of operations (G3) and a tentative area of interest (G3 and G2). The G2 is also responsible for terrain analysis products including an operational view and a tactical view.

Weather. Current weather forecasts which include light data and the impact of current weather on preparation for future operations is a responsibility of the G2. Such information is essential to a mission.

Known Enemy Information. Care must be undertaken at this stage so the staff only considers what is factually known about the enemy. The G2 provides:

- Known disposition, composition, and strength in terms of committed, reinforcing, and supporting forces.
- Recent significant activities in the area of interest.
- Enemy weaknesses and peculiarities.

Time. When conducting an in-depth analysis of the amount of time it will take to complete a maneuver, the analysis should be based on reverse planning. The G3 should be able to determine the amount of time it will take to move to the point of departure based on the following:

- The operation to be conducted.
- Present location.
- Distance from the area of operation.

This time combined with the unit's known decision cycle time will give an initial indication of the amount of time available for any other actions desired by the command.

Status of Own Forces/Known Friendly Information. The status of the unit's forces in relation to the type of operation to be conducted is determined by staff members. The following information is provided by staff members G3, G1, G4, and G5 should be considered:

- G3 - Current unit status (combat effectiveness, task organization, location, and activities).
- G3 - Mission and intent one and two levels up.
- G3 - Flank, higher, and supporting unit's status, missions, locations, and plans.
o G1 - Present percent personnel fill of entire unit and units one and two levels down.
o G1 - Top "X" (number) critical MOSs and percent fill in entire unit and one and two levels down.
o G1 - Morale and condition of soldiers.
o G1 - Significant medical information (positive or negative).

o G4 - Location of own and supporting logistical units.
o G4 - Days of supply available in own logistical facilities for selected classes of supply (III, IV) and degree of support available from supporting logistical units.
o G4 - Overall percent and numbers of fill of selected major end items, pacing (critical) items, and regulated items essential to combat operations for the force as a whole (VII). (Also the same for two levels down.)
o G4 - Current ability of organic and supporting maintenance units to repair combat essential equipment (number of days to repair).
o G4 - Projected equipment replacement information.
o G4 - Controlled supply rate.
o G4 - Supply shortages.
o G4 - Basic load percent fill.
o G4 - Mobility status of the command.

o G5 - Civil affairs unit locations and capabilities.
o G5 - Preclusion area information.

Element 5: ASSUMPTIONS

Assumptions are ideas substituted for unknown critical facts. Assumptions are only valid if a fact could logically be developed if the planner had perfect knowledge.

The mission has been analyzed and the essential facts have been identified. The staff must now make assumptions in lieu of unknown essential facts or about known essential facts that could change prior to commencement of the operation.

Assumptions are made about the following:

o Battlefield Area Analysis.
o Enemy Forces.
o Enemy Courses of Action.
o Own and Friendly Unit Status.
o Time.

Battlefield Area Analysis. Battlefield area analysis is conducted by G2 staff. They must analyze the effects of terrain on courses of action, including potential enemy modification of terrain. G2s are also responsible for analyzing the effects of weather on courses of action.
Enemy Forces. G2 staff makes the following assumptions about enemy forces:

- Estimated personnel strength.
- Estimated intelligence success.
- Estimated combat effectiveness.
- Estimated logical capabilities.

Enemy Courses of Action. G2 staff makes assumptions concerning the enemy's most likely course(s) of action. Such assumptions are made by templating. Once the analysis is completed by the G2, it is submitted to the G3 listed by the most probable order of action.

Own and Friendly Unit Status. Own and friendly unit status is a projection of the status of the unit at the beginning of the operation. The unit's ability to conduct current and future operations is stated. Such projections are based on the premise that statuses will change between receipt of the order and execution. Staff members provide the status of the following:

- G3 - Maneuver units (including combat aviation).
- G3 - Combat support units.
- G3 - Future location, status, and missions of higher uncommitted, and flank units.
- G2 - Intelligence assets.
- G1 - Status of personnel support including:
  - Percent fill of force as a whole and units one and two levels down.
  - Status of critical MOSs of force as a whole and one and two levels down.
  - Replacement flow.
  - Medical evacuation capability.
  - Hospital support capability.
  - Human factors.
- G4 - Combat service support units.
- G5 - Status of civil-military operations (CMO).
  - Civil affairs unit locations and capabilities.
  - Developments in CMO field (constraints/restraints, such as preclusion areas).

Time. The G3 must evaluate the time originally determined during mission analysis and make adjustments. Such adjustments are based on the information collected during Facts and Assumptions. Most important is the evaluation of time relative to when the unit must begin movement to accomplish the mission.
New information must be analyzed as it is received to determine its relevance and impact on current facts, assumptions, and on the overall operation. The staff must focus on the information necessary to make decisions. Assimilation of the data gathered in Facts and Assumptions is necessary to proceed to deductions.

Element 6: DEDUCTIONS

The G3 develops courses of action to accomplish the unit mission and gives them to the other staff members for evaluation in their own areas of responsibility. Based on time available, several courses of action should be developed for each probable enemy course of action.

This process is only a starting point for the selection of the course of action to be used to accomplish the mission. There are five steps used for developing courses of action. They are:

- Step 1: Analyze relative combat power.
- Step 2: Array initial forces.
- Step 3: Develop schemes and maneuver.
- Step 4: Determine command and control means and maneuver control measures.
- Step 5: Develop course of action statements and course of action sketches.

For a detailed explanation of each of these steps, turn to pages 107 through 118 of the Appendix.

Element 7: ANALYSIS

The seventh element of the command estimate is analysis. Analysis determines which course of action best accomplishes the mission by war gaming each course of action and comparing the results of war gaming.

Analysis begins with a briefing by the G3 to the staff about the courses of action. Each staff member analyzes all courses of action in his area of responsibility and shares the results to allow the staff to recommend the best course of action. Done simultaneously and often jointly, analysis includes two substeps – analyze war game courses of action, and compare war game results.

Analyze War Game Courses of Action. The following procedures are used in analysis.

The G3 follows the steps listed below for his portion of war gaming:

- Step 1: Gather the tools.
- Step 2: List all friendly forces.
- Step 3: List the assumptions.
- Step 4: List known critical events (tasks).
- Step 5: Select a war game method.
- Step 6: Select a technique to record and display the results.
- Step 7: Visualize (war game) the battle and assess the results.
The G3 war games each course of action against all probable enemy courses of action within the constraints of the time available.

The G3 also conducts Action-Reaction-Counter-action drills for each task, envisioning how to employ major subordinate commands and allocating resources as required.

The G3 determines the need for branches to be within each course of action as a result of the war gaming process. The G3 also identifies sequels applicable to future operations based on the war game results.

The G2 actively participates in the war gaming process with the G3 by providing the Reaction aspects of the enemy courses of action.

For each course of action, the G4 determines:

- Forces to be supported.
- Support requirements to man, arm, fuel, fix, and transport the force.
- The adequacy of the terrain to support the operation's logistics requirements.

For each course of action, the G1 determines:

- The posture of the forces employed.
- Potential personnel losses.

The special staff participates in the war gaming process providing information to the various staff members. They may actively participate in the Action-Reaction-Counter-action drills conducted by the G3.

All staff members analyze the courses of action. They share all relevant information which may include:

- G3 - Requirements for adjustment of initial dispositions.
- G3 - Composition of main and supporting efforts and reserves.
- G3 - Requirements for combat support.
- G3 - Missions to subordinates.
- G3 - Opportunities/requirements for deception.
- G3 - Duration of battle.
- G2 - Requirements for intelligence, NAIs, and TAIIs.
- G4 - Requirements for external support (with G3).
- G4 - Attrition of own forces and the effect of future orientation (with G3).
- G4 - Logistical supportability and resource allocation priorities.
- All staff members determine advantages and disadvantages of each course of action. These will be used during comparison.
Compare War Game Results. When comparing war game results, there are three events that must take place. First, each staff must establish a matrix for comparing the courses of action.

Second, within this matrix the advantages and disadvantages associated with each critical event or factor must be identified.

Third, each staff must decide which course of action has the highest probability of success against the most likely/dangerous enemy course of action. They must also provide some measure of success against other enemy courses of action.

The staff considers the results of area specific analysis and resolves differences in their conclusions about the course of action to recommend to the commander. The chief of staff will resolve any differences before the commander is briefed.

Element 8: DECISION

The eighth element of the command estimate is to arrive at a decision. The commander's decision is based upon his knowledge of the situation, his experience, his trust and confidence in his command, and his understanding of the estimate of the particular situation at hand. The decision may be based upon the recommendation of the staff made during the decision brief. The chief of staff organizes the briefing for the commander. (See ST 100-3 for a recommended briefing format.)

It is important to note that the commander would be briefed on the branches and sequels developed at the same time as the course of action at corps level and at echelons above corps. At lower levels, he may be briefed after his approval of the course of action.

Once the briefing is complete, the commander makes his decision. He will take one of three actions: accept the staff's recommendation, modify the staff's recommendation, or provide the staff with new guidance or a new course of action. In addition, the commander will provide guidance to the entire command as to how he wants the mission accomplished.

A warning order is issued to the command on approval of the course of action. The warning order provides advance information for subordinate units. The order is concise and explicit as to how the operation is expected to be accomplished. It also states where and when the order will be issued.

Element 9: ACTIONS AND ORDERS

On approval by the commander, the staff prepares plans and orders based on the commander's decision and concept. The preparation may be carried out quickly with established SOPs and fragmentary orders (FRAGOs).
The estimate is not complete by preparing and issuing the plan or order. The commander and staff continually conduct situation updates, take the necessary actions, and issue the necessary orders to continue the operation.

Operation orders and plans must:

- Be very visual - make maximum use of overlay.
- Not be redundant.
- Be concise. Include only those annexes that have information required by the entire command.
- Include simple branches in annexes that the command can initiate to counter enemy reactions anticipated during operation planning.
- Include specific friendly information requirements necessary to support the operation.
- Focus on retaining or regaining the initiative.
- Support or facilitate the intent of the higher commander and articulate own commander's intent.

FRAGOs must focus on retaining or regaining the initiative.

Element 10: SUPERVISION

All actions taken by the commander and staff must:

- Recognize the decision cycle time and the planning horizon (future orientation of planning necessary to ensure operations can be synchronized).
- Concentrate decisive combat power at the right place and time to defeat the enemy/accomplish the mission.
- Consider the commander's announced defeat mechanism.
- Focus on destabilizing the enemy.
- Collect information that will enable the headquarters to determine if the operation is going as per the plan or needs adjustment.
- Capitalize on success.
- Ensure the synchronization of combat power results in retaining (or regaining) the initiative and will result in victory.
Now that we have examined the planning sequence required to develop plans and orders, let us take a look at the written portion of the operation order.

The Operation Order - Preparation of the Written Order

The format of the operation order (OPORD) is divided into three parts: the heading, body, and ending. It is subdivided into five paragraphs. The paragraphs are standard and apply to all echelons of command, see Figure 2.

The format of the OPORD is established in Standardized Agreement (STANAG) 2014. Refer to the annotated extracts located in the Appendix on pages 95 through 106 for a detailed explanation of the OPORD.

**FIGURE 2. OPERATION ORDER FORM - STANAG 2014**

OPERATION ORDER FORM--STANAG 2014

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

**TASK ORGANIZATION:**

1. **SITUATION:**
   a. Enemy Forces.
   b. Friendly Forces.
   c. Attachments and Detachments.
   d. Assumptions.*

2. **MISSION**

3. **EXECUTION**
   a. Concept of Operation.
   b. Tasks to Subordinates.
   c. Fire Support.
   d. Combat Support.
   e. Reserve.
   f. Coordinating Instructions.

4. **SERVICE SUPPORT**

5. **COMMAND AND SIGNAL**

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

* Used only in an Operation Plan.
Summary

The command estimate focuses on the information the commander needs to successfully execute combat operations. The management of information is vital to any estimate process. The collection, analysis, and distribution of information is a continuous staff requirement. The elements of the command estimate include the following:

- Mission.
- Mission analysis.
- Commander's guidance.
- Facts.
- Assumptions.
- Deductions.
- Analysis.
- Decision.
- Action and orders.
- Supervision.

The command estimate is a continuous process. The three basic elements of mission, mission analysis, and commander's guidance identify the mission and the parameters under which the unit will accomplish the mission.

The written portion of the OPORD is divided into three parts: the heading, body, and ending. The format of the OPORD is established in Standardized Agreement (STANAG) 2014.
LESSON 1

LEARNING EVENT 2.

PRACTICAL EXERCISE

Now that you have completed the second learning event, test yourself with these review questions. Check your answers against the feedback section. Refer to the learning event and to the extracts on pages 93 through 116 if you have any questions.

1. Which of the following is not a true statement concerning the command estimate?

   a. The command estimate is a cut-and-dry process.
   b. The management of information is vital to the command estimate process.
   c. Collecting, analyzing, and distributing information is a continuous staff requirement when dealing with the command estimate.
   d. Staff officers must be able to act on information derived from formal or informal staff estimates, as well as information from units and intelligence sources.

Use the following information to answer question 2.

2. Within which section of the operation order would the previous information appear?

   a. Within the heading.
   b. Within the body.
   c. Within the ending.
   d. None of the above.
3. Within which section of the operation order would the above information appear?
   a. Within the heading.
   b. Within the body.
   c. Within the ending.
   d. None of the above.

4. Within which element of the estimate process is the warning order included?
   b. Element 7 - Analysis.
   c. Element 5 - Assumptions.
   d. Element 3 - Commander's Guidance.
This page is intentionally left blank.
1. Answer a is correct.

Answer a is correct. Answer a is a false statement because the command estimate is not a cut-and-dry process. The elements are not independent and may occur simultaneously.

Answer b is incorrect. Answer b is a true statement. The management of information is vital to the command estimate process.

Answer c is incorrect. Answer c is a true statement. Collecting, analyzing, and distributing information is a continuous staff requirement.

Answer d is incorrect. Answer d is a true statement. Staff officers must be able to act on information derived from formal or informal staff estimates, as well as information from units and intelligence sources.

2. Answer c is correct.

Answer a is incorrect. The information shown in question 2 would not appear in the heading of the operation order; it would appear in the ending.

Answer b is incorrect. The information shown in question 2 would not appear in the body of the operation order; it would appear in the ending.

Answer c is correct. The information shown in question 2 would appear in the ending of the operation order.

Answer d is incorrect. "None of the above" is incorrect because the correct answer is answer c.
3. Answer a is correct.

Answer a is correct. Such information (as shown with question 3) would appear in the heading of the operation order.

Answer b is incorrect. Such information (as shown with question 3) would not appear in the body of the operation order; it would appear in the heading.

Answer c is incorrect. Such information (as shown with question 3) would not appear in the ending of the operation order; it would appear in the heading.

Answer d is incorrect. "None of the above" is incorrect because the correct answer is answer a.

4. Answer d is correct.

Answer a is incorrect. Element 2, Mission Analysis, is the analysis of planning time.

Answer b is incorrect. Element 7, Analysis, determines which course of action best accomplishes the mission by war gaming each course of action and comparing the results of war gaming.

Answer c is incorrect. Element 5, Assumptions, are ideas substituted for unknown critical facts.

Answer d is correct. Element 3, the Commander's Guidance, includes the warning notice. The amount and type of guidance given by the commander depends on his preception of the operation in question and his evaluation of his staff's capabilities.
LEARNING EVENT 3

ANNEXES AND APPENDICES TO OPERATION PLANS AND ORDERS

Annexes and appendices are used to provide details in specific areas without unnecessarily complicating the basic order. Annexes and appendices are authenticated as necessary by the coordinating staff officer who has interest in the particular area. Special staff officers prepare annexes and appendices but do not authenticate them. G3/S3 assigns letter designation of annexes.

Annexes and Appendices

An annex is an integral part of an order which deals with one aspect of an operation. An example of this would be fire support. Annexes are designed by capital letters, for example, Annex B. Annexes are used to keep the basic text of an order short. The number or type of annexes used is governed by the needs of the particular order. Annexes should increase the clarity and usefulness of the order. Annexes also allow the selective distribution of certain information. They provide information and direction to subordinate and supporting units of the command. An annex to an order should not be an order from supporting unit commanders to their troops, unless it is an annex to their own orders. Annexes should not include matters covered in the SOP. Some of the information and direction given in the body of the order may be repeated in the annex.

Annexes include:

- Details that amplify the basic order (operation overlay, intelligence instructions).
- Combat support instructions (fire support, engineer).
- CSS instructions (service support overlay, traffic circulation and control instructions).
- Information or instructions on related operations (psychological operations, rear area protection).
- Any other information or directions required to amplify the order.

Appendices. Amplify an annex. An appendix would be listed as follows: Appendix 5 (Messenger Service) to Annex H (Communications-Electronics) to Operation Order 6-52d Mech. Div.

Figure 3 lists annexes with appendices that would be found in an OPORD/OPLAN.
The note signified by the asterisks in the above figure warrants further explanation. If an annex or appendix is to be issued on a wider distribution than the order itself, or separate from the order, it must include a complete heading and ending to include acknowledgement instructions, signature of the commander or his designated representative, listing of appendices, distribution, and authentication.

If an annex is issued on the same distribution as the order, and is, in fact, a part of it, then the annex need only be suitably identified with respect to its parent order. In most cases, this entails nothing more than placing an appropriate title on the annex. References and time zone designations are used as required. There is no requirement for a signature on the annex under these circumstances.

Formats for Annexes and Appendices

As a general rule, formats for annexes and appendices fall into three categories.
First Category: Annexes and appendices that have their own prescribed format. The intelligence annex and the service support annex would fit into this category. See Figure 4 for an example of an intelligence annex.

![Figure 4: Intelligence Annex Format](image)

Second Category: Annexes and appendices that are formatted like an OPORD. Examples of such formats include engineer, fire support, communications, electronics, and road movement annexes. Figure 5 depicts a fire support annex.
Third Category: Annexes and appendices that have no prescribed format. Examples include the operation overlay (see Figure 6) and flight operations.
FIGURE 6. OPERATION OVERLAY ANNEX—NO PRESCRIBED FORMAT

EX: EXAMPLE OF OPERATION OVERLAY ANNEX DIVISION: OFFENSE

(Annex issued with the operation order)

(Classification)

ANNEX B (OPERATION OVERLAY) TO OPERATION ORDER 7—889th Mech Div
LESSON 1

LEARNING EVENT 3

PRACTICAL EXERCISE

Now that you have completed the second learning event, test yourself with these review questions. Check your answers against the feedback section. Refer to the learning event and to the extracts on pages 93 through 116 if you have any questions.

1. Which of the following reflects a false statement in reference to an annex?
   a. Annexes increase the clarity and usefulness of an order.
   b. Annexes include matters covered in the SOP.
   c. Annexes allow the selective distribution of certain information.
   d. Annexes provide information and direction to subordinate and supporting units of the command.

2. The intelligence annex is an example of which type of format?
   a. Those that have a prescribed format following that of an operation order.
   b. Those that have no prescribed format.
   c. Those that have their own peculiar prescribed format.
   d. None of the above.

3. The engineer annex is an example of which type of format?
   a. Those that have a prescribed format following that of an operation order.
   b. Those that have no prescribed format.
   c. Those that have their own peculiar prescribed format.
   d. None of the above.
LESSON 1
LEARNING EVENT 3
PRACTICAL EXERCISE FEEDBACK

1. Answer b is correct.

Answer a is incorrect. Annexes do, in fact, increase the clarity and usefulness of an order.

Answer b is correct. Annexes do not include matters covered in the SOP.

Answer c is incorrect. Annexes do, in fact, allow the selective distribution of certain information.

Answer d is incorrect. Annexes do, in fact, provide information and direction to subordinate and supporting units of the command.

2. Answer c is correct.

Answer a is incorrect. The fire support annex is an example of a prescribed format which follows that of an operation order.

Answer b is incorrect. The operation overlay is an example of an annex that actually follows no prescribed format.

Answer c is correct. The intelligence annex is an example of an annex that has its own peculiar prescribed format.

Answer d is incorrect. "None of the above" is incorrect because answer c is the correct answer.

3. Answer a is correct.

Answer a is correct. The engineer annex is an example of a prescribed format which follows that of an operation order.

Answer b is incorrect. The operation overlay follows no prescribed format.

Answer c is incorrect. The intelligence annex has its own peculiar prescribed format.

Answer d is incorrect. "None of the above" is incorrect because answer a is the correct answer.
LESSON 2

MILITARY SYMBOLS, GRAPHICS, AND OVERLAY TECHNIQUES

INTRODUCTION

TASK DESCRIPTION:

Upon completion of this lesson you will be able to identify the military symbols, graphics, and appropriate overlay techniques used to support military plans and orders.

TASK

Identify military symbols, graphics, and appropriate overlay techniques used to support military plans and orders.

CONDITIONS

Given information of military symbols, graphics, and overlay techniques.

STANDARDS

Demonstrate an understanding of the task by correctly answering 80% of the multiple-choice questions.

REFERENCES

FM 101-5-1, Operational Terms and Symbols, October 1985.
FM 101-5, Staff Organization and Operations.
OVERVIEW

The first learning event is designed to teach you to identify the symbols and graphics used in the US Army. Basic symbols will be built upon to construct complete symbols. The second learning event presents various overlay techniques that may be used with operation plans or orders. Such techniques include offensive and defensive overlay techniques, restrictive coordinating measures, and permissive coordination measures.

LEARNING EVENT 1

MILITARY SYMBOLS

A military symbol is a sign, composed of a diagram, number, letter, abbreviation, color, or combination thereof, which is used to identify and distinguish a particular military unit, activity, or installation.

Military symbols are used primarily for:

- Situation maps, overlays, and overprints.
- Aerial photographs (annotated).
- Graphic display transmitted by automated means between US forces, forces of one nation and another, between national forces and an allied headquarters, and between allied headquarters.

The military symbols presented in this lesson will not be used for:

- Naval plotting.
- Military geographic information and documentation.
- Telecommunications diagrams.
- Minefield records.

Color Representation

Ideally, different colors are used to depict enemy and friendly symbols. As in this course, different colors are not always available. Procedures for one-color symbols are as follows:

- Friendly symbols are outlined by a single line.
- Enemy symbols are outlined by double lines. For enemy equipment, ground environment, and activities symbols, use the abbreviation "EN."
Developing the Military Symbol

Military symbols usually consist of the following:

- The basic symbol and interservice symbol.
- The unit size symbol.
- The unit role indicator.
- The installation role indicator.
- Equipment indicator.
- Aviation symbol.
- Location and content of the fields surrounding the basic field.

Basic and Interservice Symbols

Geometric figures form the basic symbols used to represent units, installations, and activities. These symbols are as follows:

- UNIT.
- HEADQUARTERS.
- LOGISTICAL, MEDICAL, or ADMINISTRATIVE INSTALLATION.
- COMBAT SERVICE SUPPORT ELEMENT OF A THEATER ARMY.
- COMBAT SERVICE SUPPORT ELEMENT OF A US CORPS.
- COMBAT SERVICE SUPPORT ELEMENT OF A US COMBAT UNIT (BRIGADE TRAINS AND BELOW).
Interservice symbols adopt the basic symbols, but are noted with specific symbols. For interservice use, Army, Navy, Air Force, and Marine Corps are distinguished as follows:

**Army Logistical or Administrative Installation.** Military symbols referring to Army units, installations, and activities have no special designation.

**Air Force Logistical or Administrative Installation.** Air Force units, installations, and activities are indicated by placing the symbol $\infty$ within the basic symbol.

**Navy Logistical or Administrative Installation.** Naval units, installations, and activities are indicated by placing the symbol $\perp$ within the basic symbol.

**Marine Corps Logistical or Administrative Installation.** Marine Corps units, installation, and activities are indicated by the symbol $\perp$ placed in the basic symbol.

Unit Symbol Size Notation

To show the size of a specific unit, the appropriate size symbol is placed on top of the basic symbol. Refer to the examples that follow.

The symbols used to represent a UNIT BELOW COMPANY LEVEL are shown below.

A rectangle with a single circle directly above it represents a SQUAD OR CREW. A squad is normally commanded by a sergeant.
A rectangle with two circles directly above it represents a SECTION. A section is normally commanded by a staff sergeant.

A rectangle with three circles directly above it represents a PLATOON or DETACHMENT. They are normally commanded by a lieutenant.

The symbols used to represent the size of UNITS FROM COMPANY TO REGIMENTAL OR GROUP LEVEL are shown below.

A rectangle with a single vertical line centered directly above it represents a COMPANY, TROOP, or BATTERY. They are commanded by a captain.

A rectangle with two vertical lines centered directly above it represents a BATTALION or SQUADRON. They are commanded by a lieutenant colonel.

A rectangle with a three vertical lines centered directly above it represents a GROUP or REGIMENT. They are commanded by a colonel.

The symbols used to represent the size of a UNIT FROM BRIGADE LEVEL OR HIGHER are shown below.

A rectangle with an "X" centered directly above it represents a BRIGADE. Brigades are commanded by a colonel. Separate brigades are commanded by the brigadier general.

A rectangle with two "Xs" centered directly above it represents a DIVISION. A division is commanded by a major general.

A rectangle with three "Xs" centered directly above it represents a CORPS. A corps is commanded by a lieutenant general.

A rectangle with four "Xs" centered directly above it represents an ARMY or a JOINT TASK FORCE. Such a force is commanded by a general.
A rectangle with five "Xs" centered directly above it represents an ARMY GROUP or FRONT.

A rectangle with two vertical lines centered directly above it enclosed in a box is a special size indicator for a NONORGANIC or TEMPORARY GROUPING.

Major Commands - Communications Zone

In addition to the size symbols shown above, the following apply to certain major commands located in the communications zone:

MISSION COMMAND. Normally assigned to the theater army, these commands control groups, brigades, or other organizations that support the theater. Such examples include engineer, medical, transportation, and personnel.

AREA SUPPORT GROUP OF A THEATER ARMY AREA COMMAND (TAACOM).

THEATER ARMY AREA COMMAND.

THEATER ARMY.

Unit Role Indicators

Unit role indicators are used to designate arm, branch of service, or function. Branch or functional symbols are placed inside the basic symbol. Symbols may be combined with one another as appropriate to show a unit's exact function. When no branch or functional symbol is provided, the designation or authorized abbreviated designation of the unit, or basic task of the unit, may be written inside the basic symbol.

ADJUTANT GENERAL. This also includes personnel services and administration.

AERIAL OBSERVATION - AIR FORCE (surveillance).

AERIAL OBSERVATION - Army.
AIRBORNE. Normally associated with another branch/functional symbol.

AIR ASSAULT. Represents an air assault unit that has sufficient aircraft to perform air assault missions.

AIR ASSAULT. Represents units organic or assigned to air assault divisions and trained in air assault operations but without sufficient aircraft to perform air assault missions.

AIR CAVALRY.

AIR DEFENSE.

AMPHIBIOUS.

AMPHIBIOUS ENGINEER.

ANTIARMOR.

ARMOR.

ARMORED CAVALRY.

ARMY AVIATION - rotary wing.
ARMY AVIATION - fixed wing.

ATTACK HELICOPTER.

BRIDGING.

CAVALRY OR RECONNAISSANCE.

CHEMICAL (NBC).

CHEMICAL (NBC decontamination).

CHEMICAL (reconnaissance).

CHEMICAL (smoke generator).

CIVIL AFFAIRS (US only).

DATA PROCESSING UNIT.
DENTAL.

ENGINEER.

ELECTRONIC WARFARE.

FIELD ARTILLERY.

FINANCE/PAY.

INFANTRY.

LIGHT INFANTRY.

MECHANIZED INFANTRY - APC.

MECHANIZED INFANTRY - BIFV (mounted).

MECHANIZED INFANTRY - BIFV (dismounted).
MOTORIZED INFANTRY.

LABOR RESOURCES.

MAINTENANCE.

MEDICAL.

METEOROLOGICAL.

MILITARY INTELLIGENCE. At corps and below, insert is CEW.

MILITARY POLICE.

MOTORIZED.

MOUNTAIN.

ORDANCE.

PETROLEUM SUPPLY.
PSYCHOLOGICAL OPERATIONS.

QUARTERMASTER.

RANGER.

REPLACEMENT/REINFORCEMENT HOLDING UNIT (NATO).

ROCKET ARTILLERY.

SERVICE.

SIGNAL/COMMUNICATIONS.

SOUND RANGING.

SPECIAL FORCES.

SUPPLY.
SUPPLY AND MAINTENANCE.

SUPPLY AND TRANSPORTATION.

SUPPORT.

SURFACE-TO-AIR MISSILE.

SURFACE-TO-SURFACE MISSILE.

SURVEY.

TOPOGRAPHIC.

TRANSPORTATION.

UNMANNED AIR RECONNAISSANCE.

VETERINARY.
Installation Role Indicator

Collecting Points. The following installation role indicators are for collecting points. A collecting point is described as a facility established within the corps and division. There are two types, a general collecting point and a maintenance collecting point. A general collecting point is a facility established for the control of civilians, prisoners, or stragglers. A maintenance collecting point is a point established to collect equipment awaiting repair, controlled exchange, cannibalization, or evacuation. Such a point may be operated by the user or by intermediate maintenance units:

- CANNIBALIZATION.
- CIVILIAN.
- DECONTAMINATION STATION (below symbol indicate personnel PERS or equipment EQUIP, or both).
- MAINTENANCE.
- PRISONERS OF WAR.
- SALVAGE.
- STRAGGLERS.
Communications and Electronics. The following unit role indicators are for communications and electronics:

- **AIR DEFENSE RADAR.**
- **ARTILLERY LOCATING RADAR.**
- **AUTOMATIC DATA PROCESSING CENTRAL.**
- **DIRECTION FINDING.**
- **ELECTRONIC WARFARE.**
- **GROUND SENSOR/GROUND SURVEILLANCE RADAR.**
- **INTERCEPT.**
- **JAMMING.**
- **RADIO RELAY STATIONS.**
- **RADIO/WIRELESS STATION.**
Classes of Supply Symbols

There are 10 classes of supply symbols. They must be planned for when planning combat operations. The 10 classes of supply symbols include the following:

**Class I - Subsistence.**

**Class II - Clothing, individual equipment, tentage, organizational tool sets.**
Class III - Petroleum.

- Ground
- Air Force
- Army Aviation
- Solid Fuel - (coal or wood)

Class IV - Construction.
Class V - Ammunition.

- All Types - less special
- Air Defense
- Air Force
- Ammunition Transfer Point
- Army Aviation
- Artillery (gun/howitzer)
- Chemical
- Mines and Explosives
- Nuclear
- Rocket Artillery
- Small Arms
- Tank, Main Gun
Class VI - Personal Demands.

Class VII - Major end items.

Class VIII - Medical materiel.

Class IX - Repair parts.

Class X - Materiel to support nonmilitary programs (nonmilitary sales items).

All classes

Multiple Classes but not all. (List available classes by number below the "all classes" symbol.)
Figure 7 displays a comparative table of NATO and US classes of supply.

<table>
<thead>
<tr>
<th>NATO CLASS OF SUPPLY</th>
<th>DESCRIPTION</th>
<th>US CLASS OF SUPPLY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Those items which are consumed by personnel or animals as an approximate uniform rate, irrespective of local change in combat or terrain conditions. Examples: rations and forages.</td>
<td>I</td>
<td>Subsistence including gratuitous health and welfare items.</td>
</tr>
<tr>
<td>II</td>
<td>Supplies for which allowances are established by billets of organization and equipment. Examples: clothing, weapons, mechanics' tools, space parts, vehicles, etc.</td>
<td>II</td>
<td>Clothing, individual equipment, tents, tool sets, and tool kits, hand tools, administrative and household supplies and equipment. Includes items of equipment, other than principal items, prescribed in authorization/allowance tables and items of supply (not including repair parts).</td>
</tr>
<tr>
<td>III</td>
<td>Fuels and lubricants for all purposes, except for operating aircraft or for use in weapons such as flamethrowers. Examples: gasoline, kerosene, diesel oil, fuel oil, lubricating oil and grease, and solid fuels such as coal, coke, and wood. For Air Force (IIIa): Aviation fuel &amp; lubricant.</td>
<td>III</td>
<td>POL: Petroleum fuels; lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, chemical products, collants, dyes and colorants compounds, together with component additives of such products and coal.</td>
</tr>
<tr>
<td>IV</td>
<td>Supplies for which initial issue allowances are not prescribed by approved issue tables. Normally such supplies include fortification and construction materials, as well as additional quantities of items identical to those authorized for initial issue (Class II), such as additional vehicles.</td>
<td>IV</td>
<td>Construction: Construction materials to include installed equipment and all fortification/barrier materials.</td>
</tr>
<tr>
<td>V</td>
<td>Ammunition, explosives and chemical agents of all types.</td>
<td>V</td>
<td>Ammunition: Ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, land mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.</td>
</tr>
</tbody>
</table>

VII Major End Items: A final combination of end products which is ready for its intended use; (principal items) e.g., launchers, tanks, mobile machine shops, vehicles.

VIII Medical material including medical peculiar repair parts.

IX Repair parts and components to include kits, assemblies and subassemblies, repairable and non-repairable required for maintenance supply of all equip.
Miscellaneous Symbols. The following are miscellaneous symbols:

- **GRAVES REGISTRATION SERVICE.**
- **HOSPITAL/AID STATION.**
- **MATERIAL MANAGEMENT CENTER.**
- **PARKING.**
- **TOPOGRAPHIC (map).**
- **TRAFFIC CONTROL.**
- **WATER.**

**Weapon Symbols**

Symbols can be used to indicate the type and location of a weapon or group of weapons. When a weapon symbol appears on a map or overlay, the base of the shaft indicates the location of the weapon. Figure 8 illustrates the type and size of weapons.

If a weapon has a high trajectory, a \[ \text{ } \] is placed at the base of the shaft. For example, \[ \text{ } \] represents a medium mortar. If a weapon has a flat trajectory, a \[ \text{ } \] is placed at the base of the shaft. For example,
represents a light antitank gun. If the weapon is primarily for air defense, a \( \) is placed at the base of the shaft. For example, \( \) represents an air defense gun. If the weapon is rocket launched, a \( \) is placed at the head of the shaft. For example, \( \) represents a rocket launcher. If a weapon is also a tracked, self-propelled vehicle, a \( \) is placed below the weapon symbol. For example, \( \) represents tracked, self-propelled medium howitzer.

Examples of weapons are shown in Figure 8.
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>LIGHT</th>
<th>MEDIUM</th>
<th>HEAVY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flamethrower</td>
<td><img src="image1" alt="Symbol" /> portable</td>
<td><img src="image2" alt="Symbol" /> vehicular</td>
<td></td>
</tr>
<tr>
<td>Gun in air defense role, self-propelled</td>
<td><img src="image3" alt="Symbol" /></td>
<td><img src="image4" alt="Symbol" /></td>
<td><img src="image5" alt="Symbol" /></td>
</tr>
<tr>
<td>Gun in antitank role</td>
<td><img src="image6" alt="Symbol" /></td>
<td><img src="image7" alt="Symbol" /></td>
<td><img src="image8" alt="Symbol" /></td>
</tr>
<tr>
<td>Howitzer</td>
<td><img src="image9" alt="Symbol" /></td>
<td><img src="image10" alt="Symbol" /></td>
<td><img src="image11" alt="Symbol" /></td>
</tr>
<tr>
<td>Machine gun/automatic weapon</td>
<td><img src="image12" alt="Symbol" /></td>
<td><img src="image13" alt="Symbol" /></td>
<td><img src="image14" alt="Symbol" /></td>
</tr>
<tr>
<td>Mortar</td>
<td><img src="image15" alt="Symbol" /></td>
<td><img src="image16" alt="Symbol" /></td>
<td><img src="image17" alt="Symbol" /></td>
</tr>
<tr>
<td>Multibarrel rocket launcher</td>
<td><img src="image18" alt="Symbol" /></td>
<td><img src="image19" alt="Symbol" /></td>
<td><img src="image20" alt="Symbol" /></td>
</tr>
<tr>
<td>Surface to-air-missile</td>
<td><img src="image21" alt="Symbol" /></td>
<td><img src="image22" alt="Symbol" /></td>
<td><img src="image23" alt="Symbol" /></td>
</tr>
<tr>
<td>Surface-to-surface missile</td>
<td><img src="image24" alt="Symbol" /></td>
<td><img src="image25" alt="Symbol" /></td>
<td><img src="image26" alt="Symbol" /></td>
</tr>
<tr>
<td>Air defense gun</td>
<td><img src="image27" alt="Symbol" /></td>
<td><img src="image28" alt="Symbol" /></td>
<td><img src="image29" alt="Symbol" /></td>
</tr>
<tr>
<td>Antitank gun</td>
<td><img src="image30" alt="Symbol" /></td>
<td><img src="image31" alt="Symbol" /></td>
<td><img src="image32" alt="Symbol" /></td>
</tr>
<tr>
<td>Antitank missile, self-propelled</td>
<td><img src="image33" alt="Symbol" /></td>
<td><img src="image34" alt="Symbol" /></td>
<td><img src="image35" alt="Symbol" /></td>
</tr>
<tr>
<td>Antitank rocket launcher</td>
<td><img src="image36" alt="Symbol" /></td>
<td><img src="image37" alt="Symbol" /></td>
<td><img src="image38" alt="Symbol" /></td>
</tr>
</tbody>
</table>
Mobility. Mobility is depicted by the following symbols:

- AMPHIBIOUS.

- BARGE OR BOAT.

- OVER-SNOW (prime mover).

- TOWED VEHICLE OR TRAILER.

- TRACKED OR SELF-PROPELLED.

- WHEELED.

- WHEELED CROSS-COUNTRY.

- WHEELED/TRACKED COMBINATION.

Vehicles. Except for armored vehicles, symbols for vehicles are made by combining two types of symbols - one for the body type, the other for the means of mobility.

- AMPHIBIOUS (cargo).

- ARMORED PERSONNEL CARRIER (APC).
Aviation. Figure 9 depicts symbols specific to aviation. Fixed wing, helicopter, and the remotely piloted vehicle are illustrated.
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Air Force SYMBOL</th>
<th>Army SYMBOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed wing</td>
<td>![Fixed wing symbol]</td>
<td>![Fixed wing symbol]</td>
</tr>
<tr>
<td>Bomber</td>
<td>![Bomber symbol]</td>
<td>![Bomber symbol]</td>
</tr>
<tr>
<td>Fighter</td>
<td>![Fighter symbol]</td>
<td>![Fighter symbol]</td>
</tr>
<tr>
<td>Reconnaissance</td>
<td>![Reconnaissance symbol]</td>
<td>![Reconnaissance symbol]</td>
</tr>
<tr>
<td>Transport/lift</td>
<td>![Transport/lift symbols (Light, Medium, Heavy)]</td>
<td>![Transport/lift symbols (Light, Medium, Heavy)]</td>
</tr>
<tr>
<td>Helicopter</td>
<td>![Helicopter symbol]</td>
<td>![Helicopter symbol]</td>
</tr>
<tr>
<td>Attack</td>
<td>![Attack symbol]</td>
<td>![Attack symbol]</td>
</tr>
<tr>
<td>Reconnaissance</td>
<td>![Reconnaissance symbol]</td>
<td>![Reconnaissance symbol]</td>
</tr>
<tr>
<td>Transport/lift</td>
<td>![Transport/lift symbols (Light, Medium, Heavy)]</td>
<td>![Transport/lift symbols (Light, Medium, Heavy)]</td>
</tr>
<tr>
<td>Remotely piloted vehicle (RPV)</td>
<td>![RPV symbol]</td>
<td>![RPV symbol]</td>
</tr>
</tbody>
</table>
Use of Fields

Now that we have looked at the basic symbols, we are ready to create more complex symbols. Each symbol requires a minimum amount of information to be understood. This information is specified by mandatory fields. A field is a designated area around the basic symbol which is used to display a particular item of information.

Conditional fields display information that modifies the basic symbol and is usually temporary. Optional fields provide additional information that the commander or staff officer wished to display. Optional fields may or may not be used. The position of the fields in relation to the basic symbol is shown in Figure 10. A field position is shown by ☼.
FIGURE 10. LOCATION OF FIELDS

UNITS

INSTALLATIONS*

EQUIPMENT

POINTS

AREAS

LINES

BOUNDARIES

Note:
1. Fields with more than one letter, display only applicable information.
2. Red letters indicate enemy use only.

*Also applies to observation posts and electronic installations.

**Field T, Unique Designation, provides the locations for identifying the unit by numbers, letters, names, or abbreviations. Within this field the first designator (the unit’s own designation) is placed to the lower left of the square and must agree with the size indicator in field B. Higher echelons of command are then placed in field M, Higher Formation, and are separated by a slash. For those units identified under the Combat Arms Regimental System (CARS), but assigned to a brigade rather than a regiment, both the battalion and traditional regimental numbers are shown, i.e., 1-23, 3-40. To avoid confusion with different levels of command, both numerical designations of the CARS unit are always written together and separated by a hyphen rather than a slash. If there is a break in the chain of command, i.e., the brigade designation is skipped, then the division numeric designation is shown in field M and the size indicator for that echelon of command is placed in field H.

When a unit is part of a regiment, such as the 75th Infantry Regiment, the unique designator is placed in field T and the regimental designation is placed in field M.
Figure 11 lists each field by letter designation, its field title, a description, and application. Fields A, B, T, and P are mandatory fields, while fields D, F, and N, are conditional fields. All others are optional fields.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>FIELD TITLE</th>
<th>DESCRIPTION</th>
<th>APPLICATION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANDATORY: A field which must have something in it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Role Indicator</td>
<td>Basic symbol for units, posts and installations, or equipment.</td>
<td>All</td>
<td>Must be indicated for installations when the name of the installation is not unique and unambiguous. A question mark may be used if information is not confirmed when depicting on an event unit.</td>
</tr>
<tr>
<td>B</td>
<td>Size Indicator</td>
<td>A symbol placed on top of the basic symbol to show the size.</td>
<td>Units and installations</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Unique Designation</td>
<td>An alphanumeric title that uniquely identifies a particular symbol.</td>
<td>All (per system equipment)</td>
<td>Must agree with size indicator if used. If unknown or unconfirmed, a question mark must be used. May include national distinguishing letter. <strong>CNCS</strong></td>
</tr>
<tr>
<td>P</td>
<td>Addressing Number</td>
<td>Used for identification when symbol is incomplete or duplicated.</td>
<td>Enemy only units, installations, and equipment</td>
<td>Always shown in parentheses and consists of three numerals.</td>
</tr>
</tbody>
</table>

CONDITIONAL: A field which, under certain conditions, must have something in it. When specific conditions are not applicable, it is optional.

| D | Special Size Indicator | Task force or company have (permanent grouping). | Units and installations | |
| F | Terminated or Detached | Shows whether size indicator is terminated (+) or reduced (-). | Units | Indicates addition to next subordinate element (+) or detachment of next subordinate element (-). Always shown in parentheses. |
| N | Enemy | Indicates enemy by letter “E.” | Enemy equipment | Not required when identified by color or double line. |

OPTIONAL: A field which may be left blank.

| C | Quality of Equipment | Indicates number of times present. | Equipment | Question mark may be included. |
| E | Unconfirmed | Question mark. | Enemy only | Used when all information is doubtful. |
| G | Additional Information | Unit comments (example: nickname). | All | Is not necessarily transmitted to others. |
| H | Free Text | Additional information not covered by other fields. | All | Question mark permitted with any information. Information in this field will be transmitted. |
| J | Evaluation Rating | One letter and one number. | Enemy only | See STANAG 2222 for ratings. J nice J 34-1 for ratings. |
| K | Combat Effectiveness | Indicates the effectiveness of the unit or formation displayed. | Units and installations | Displayed as CE followed by a space and two digits, or PC followed by a space and two digits. Free text follows separated by a dash. See AR 270-1. |
| L | Signature Equipment | Indicated by “T” (primarily refers to detachable electronic signature). | Enemy only equipment | Free text follows separated by a dash. |
| M | Higher Formation | Member or title of higher echelon of command. | All | Question mark may be included. National distinguishing letters are displayed in parentheses, if used. Must be shown in order of seniority. **CNCS** |
| Q | Direction of Movement Arrow | Represents the direction in which the symbol is moving or will move. | All | Always positioned at the precise location point of the symbol. |
| R | Mobility Indicator | Pictorial representation of mobility. | Units and equipment | |
| S | Headquarters Representation | Identifies unit symbol as a headquarters. | Units | |
| V | Type of Equipment | Identifying class or type rather than unique designation. | Equipment | When unconfirmed include question mark. |
| W | Date-Time Group | Seven-character alphanumeric field for date and time (may be preceded by “AT,” “TO,” or “FROM”). | All | When few fields are indicated, show “FROM” and “TO” or equivalent. |

Now that we have described the location and the content of fields, let's look at some complete examples.
All of the following are included under the COMBAT ARMS REGIMENTAL SYSTEM (CARS):

- **EIGHTH ARMY.**
  - III CORPS.
  - 10th INFANTRY DIVISION, III CORPS, EIGHTH ARMY.
  - 1st BRIGADE, 10th INFANTRY DIVISION, III CORPS.
  - 2d BATTALION, 15th INFANTRY, 1st BRIGADE, 10th INFANTRY DIVISION.
  - A COMPANY, 2d BATTALION, 15th INFANTRY, 1st BRIGADE, 10th INFANTRY DIVISION.
  - 2d PLATOON, A COMPANY, 2d BATTALION, 15th INFANTRY, 10th INFANTRY DIVISION.
  - 1st SQUAD, 2d PLATOON, A COMPANY, 2d BATTALION, 15th INFANTRY.
  - 125th INFANTRY BRIGADE (MECH), III (US) CORPS.
  - 40th ARMORED DIVISION, SIXTH ARMY.
  - 5th SPECIAL FORCES GROUP, FOURTH ARMY.
Figure 12 displays examples of symbols by role indicator within a type division.

1st SIGNAL BRIGADE, III CORPS.

11th ARMORED CAVALRY REGIMENT, V CORPS.

All of the following are REGIMENTAL:

75th INFANTRY REGIMENT.

3d BATTALION, 75th INFANTRY REGIMENT.

A COMPANY, 3d BATTALION, 75th INFANTRY REGIMENT.

2d PLATOON, A COMPANY, 3d BATTALION, 75th INFANTRY REGIMENT.

4th SQUAD, 2d PLATOON, A COMPANY, 3d BATTALION, 75th INFANTRY REGIMENT.
FIGURE 12. SYMBOLS BY ROLE INDICATOR WITHIN A TYPE DIVISION

Airborne Division

- XX: Abn Div
- X: Abn Inf Bde
- X: Abn ADA Bn
- x: Abn FA Bn
- X: Abn Armored Bn
- X: Abn Sig Bn

Air Assault Division

- XX: AASLT Div
- X: Div Arty AASLT
- X: AASLT Bde
- X: Arm Gp AASLT
- X: Inf Bn AASLT
- X: Engr Bn AASLT

Armor Division

- XX: Armor Div
- X: Div Arty
- X: Div Spt Comd
- X: Cbr Avn Bde
- X: Mech Inf Bn
- X: Inf(M) Bn
- X: Cbr Trains

Mechanized Division

- XX: Inf Div
- XX: Div Arty
- XX: Inf Bde (Mech)
- XX: Armored Bn
- XX: Mech Div
- XX: Field Trains
- XX: Engr Bn

Infantry Division (Light)

- XX: Inf Div (Light)
- XX: Div Arty
- XX: Div Spt Comd
- XX: Inf Bde (Light)
- XX: Bde Trains
- XX: Inf Bn (Light)

Infantry Division

- XX: Inf Div
- XX: Div Arty
- XX: Div Spt Comd
- XX: Inf Bde
- XX: Tank Bn
- XX: Air Cav Sqn
FIGURE 12. CONTINUED
The following are examples of symbols by branch:

**Air Defense Artillery**

- SGT YORK/STINGER
- STINGER Crew
- SGT YORK Platoon
- HAWK Battalion
- CHAPARRAL Platoon
- PATRIOT Battalion

**Armor**

- Armored Battalion
- Armored Cavalry

**Field Artillery**

- Field Artillery Battalion with towed HOWITZER
- Field Artillery Battalion PERSHING
- Field Artillery Battalion with self-propelled HOWITZER
- Multiple Launched Rocket System Battery
- Field Artillery Battalion LANCE
- Field Artillery Target Acquisition Battery
Signal

- FWD: Forward Communications Company
- RDO: Radio Battalion
- AREA: Area Signal Battalion
- SFT: Signal Support Operations Company
- OPS: Command Operations Company

Military Intelligence

- MI: Military Intelligence Battalion
- MI OPS: Military Intelligence Operations Battalion
- MI TAC: Military Intelligence Battalion, Tactical Exploitation
- MI VR: Military Intelligence Battalion, Aerial Exploitation
- CEMI: Divisional Military Intelligence Battalion

Medical

- Medical Battalion
- Medical Company, Veterinarian
- Medical Battalion, Dental
Infantry

- Infantry Battalion
- Infantry Battalion (Motorized)
- Infantry Battalion (Light)
- Antiarmor Company
- Infantry Battalion (Mechanized)

Maintenance

- Maintenance Battalion
- Aviation Maintenance Battalion

Transportation

- Supply and Services Battalion
- Transportation Battalion
- Supply and Transportation Battalion

The following are examples of symbols with field information added:

Installations

**Ammunition Supply Point of the 3d Bde, 3d Armd Div, open as of 1300Z the 12th.**

121300Z  
3  
3 AD
Personnel Decontamination Point of the 1st Bde, 2d Inf Div, open as of 1800Z the 12th.

Aviation Fuel Supply for the 1st Inf Div.

Water Point of the 2-36th Inf open as of 0900Z the 1st.

1st Corps Engineer Construction Supply Point.

Units

1st Bn, 87th Inf (Reinforced) of the 3d Bde, 2d Armd Div.

B Co, 3d Bn, 9th Inf, being reconstituted as of 1000Z the 5th.

3d Bn, 9th Inf of the 2d Armd Div, rated C-1, moving north as of 1230Z the 17th.

A Co, 1st Bn (Mech), 54th Inf, Dismounted, rated C-2, moving east as of 2200Z the 22d (APC equipped).
Eight 155-mm Howitzers of A Btry, 1st Bn, 2d FA, valid as of 0800Z the 7th.

Two STINGER missiles from 1st Plt, A Btry, 2d Bn, 6th ADA, with cross-country mobility. Location valid as of 1000Z the 11th.

Four BIFV of the 3d Plt, B Co, 1st Bn, 87th Inf, rated C-1 and moving east.

Six M-1 Tanks from A Co, 2-34 Armd, 3d Bde, refueling as of 0600Z the 21st, rated C-2.

Four 4.2-inch Mortars from C Co, 1st Bn, 9th Inf, moving NW and requiring ammo resupply.

Three MLRS from A Btry, 3d Bn, 16th FA, in hide position.

Six 5 ton Trucks from B-Co, 2d Engr, moving east.

An RPV flying within a 5km radius as of 1500Z the 15th.

An Enemy Heavy Antitank Gun.
LESSON 2

LEARNING EVENT 1

PRACTICAL EXERCISE

Now that you have completed the first learning event, test yourself with these review questions. Check your answers against the feedback section. Refer to the learning event and to the extracts on pages 93 through 116 if you have any questions.

1. Which of the following basic symbols depicts an observation post?

   a. □
   b. ○
   c. △
   d. □

2. Which of the following symbols represents a platoon?

   a. [Symbol A]
   b. [Symbol B]
   c. [Symbol C]
   d. [Symbol D]

3. Which of the following represents the 2d Platoon, A Company, 2d Battalion, 15th Infantry, 10th Infantry Division?

   a. [Symbol A]
   b. [Symbol B]
   c. [Symbol C]
   d. [Symbol D]
LESSON 2

LEARNING EVENT 1

PRACTICAL EXERCISE FEEDBACK

1. Answer c is correct.

Answer a is incorrect. A headquarters is represented in answer a.

Answer b is incorrect. A logistical, medical, or administrative installation is depicted by the circle.

Answer c is correct. A triangle represents an observation post.

Answer d is incorrect. A unit is depicted by a rectangle.

2. Answer a is correct.

Answer a is correct. A platoon is represented by the symbol shown in answer a.

Answer b is incorrect. A company, troop, or battery is represented by the symbol shown in answer b.

Answer c is incorrect. A group or regiment is represented by the symbol shown in answer c.

Answer d is incorrect. A corps is represented by the symbol shown in answer d.

3. Answer b is correct.

Answer a is incorrect. A Company, 2d Battalion, 15th Infantry, 1st Brigade, 10th Infantry Division is represented by the symbol shown in answer a.

Answer b is correct. 2d Platoon, A Company, 2d Battalion, 15th Infantry, 10th Infantry Division is represented by the symbol shown in answer b.

Answer c is incorrect. 2d Platoon, A Company, 3d Battalion, 7th Infantry Regiment is represented by the symbol shown in answer c.

Answer d is incorrect. 1st Squad, 2d Platoon, A Company, 2d Battalion, 15th Infantry is represented by the symbol shown in answer d.
LEARNING EVENT 2

GRAPHICS AND OVERLAY TECHNIQUES

Situation maps and overlays provide a rapid and easily understood means by which a commander or staff officer may express an operational plan, concept, or friendly or enemy situation. The combination of unit and weapon symbols with objectives, boundaries, routes of march, and other control measures creates an indispensable tool for quickly and accurately portraying battle activity. In a fast-moving situation, when timely and accurate decisions must be made, the commander may not have the time to read a lengthy operation plan or order. One method of dealing with dynamic plans and orders requirements is through the use of Fragmentary Orders (FRAGOS).

Standardization of techniques is essential if tactical information is to be relayed without misunderstanding. Such standardization is represented by the graphics used on overlay techniques. Graphics are used to portray the following:

- Locations.
- Points, lines, and areas.
- Routes, obstacles, crossings, movements, and fire planning.

One of the major benefits that an overlay provides is simplification in portraying the tasks and instructions of a commander to his subordinate commanders. An operation overlay augments the written portion of the order and promotes clarity, accuracy, and brevity by conveying instructions graphically. Any pertinent information and instruction that can be shown graphically should be included. With the exception of the mission and, as appropriate, the concept of operation, information shown on the overlay need not be repeated in the written section.

Take time to examine Figure 13. We will examine the methods of using overlay techniques to portray instructions to subordinate headquarters. Specifically, we will look at the following:

- Offensive overlay techniques.
- Defensive overlay techniques.
- Restrictive and non-restrictive fire support control measures.
Objectives. Objectives are shown by solid "goose eggs" (see Letter "A," Figure 13). This should be labeled with the abbreviation "OBJ." It is also given as a letter, number, code name, or unit designation identification. Numbering of objectives does not indicate the sequence of capture or of importance. Normally, the division operation overlay will show only objectives assigned by the division. For example, objectives for battalions are shown on a division operation overlay only if the battalion is under division control. The size of the "goose egg" indicates the area the higher commander wants the subordinate unit to control.

Boundaries. Boundaries that are presently in effect or made effective by the order are shown by a solid line (see Letter "B"). Those that are future or proposed boundaries are shown by a broken line and may be labeled with the effective time. A symbol is placed on a boundary to show the size and designation of the largest units which have a common boundary. If lateral units that have a common boundary are of unequal size, the symbol of the larger unit is used. The size of the smaller unit is indicated with its designation. Boundaries should follow landmark or terrain features that are clearly recognizable on the ground and on the map. Boundaries are extended
beyond the objective a sufficient distance to provide for the coordination of supporting fires and actions required to secure and consolidate the objective.

Boundaries are extended to the rear of the following:

- Forward brigades to include the area of responsibility of these units. Normally, the reserves of these units are included.
- Division and higher units to their own rear boundary.

Rear boundaries are established by the next higher headquarters for division and corps. In the defense, the division normally brigade rear boundaries.

No boundary is required between a major unit and an armored cavalry or other type unit performing a covering, a screening, or a protecting mission on the major unit's flank. The protecting unit must guide on the protected.

Boundaries designate the zone of action of attacking units. Therefore, they control the fire and maneuver of the attacking units.

Phase Lines. Phase lines are shown by solid lines drawn on the map (see Letter "C"). They are labeled "PL" and given a letter, number, or code name designation. Phase lines are used as a basis for reporting and as a control measure. All phase lines should be clearly defined on the ground and on the map.

Lines of Departure. The line of departure for units in contact may be an appropriate terrain line or it may be designated as "Line of Departure is Line of Contact." The LD/LC (abbreviated form) is placed on the overlay adjacent to the indicated Forward Line of Own Troops (FLOT) or Forward Edge of the Battle Area (FEBA). In conjunction with the time of attack, the line of departure serves to coordinate the advance of the attack echelon so that its elements will strike the enemy in the order and at the time desired. The lines of departure should be clearly recognizable on the ground and on the map.

Locations of Units. During the attack, locations of units are indicated by the following:

- Boundaries and a command post location (if known) for forward units.
- A solid "goose egg" (see Letter "D") with the unit symbol or the command post symbol (if location is known) to show the location of reserve units.
The future or proposed location of a reserve unit by a broken "goose egg" containing a unit symbol also drawn with broken lines (except for branch or duty performed which is drawn in solid lines) and an expected time of occupancy.

Two or more units may be shown in the same "goose egg" if they are in the same general area. This special technique is used when it is desirable to graphically show the composition of the reserve, but does not indicate any particular command relationship between these units.

Command Posts. Future or proposed command post locations are shown by a broken line command post symbol, while current command post locations are depicted by a solid line (see Letter "E"). When the main command post is the only one depicted on the overlay, it need not be labeled "AIN." When more than one echelon of the headquarters is shown on the same overlay, each must have the appropriate designation below the unit symbol.

Reconnaissance Units. A reconnaissance unit with a security mission may be indicated on the overlay by the unit symbol and arrows. The arrows do not show the exact location of the unit, but the area of its operations. The mission for the unit will be written on the overlay, such as "screen" or "guard."

Direction of Attack. (See Letter "F"). Direction of attack is shown graphically as an arrow extending from the line of departure. The arrow is not normally labeled. The direction of attack is a specific direction or route that the main attack or the main body of the force will follow. If used, it is normally at battalion or lower levels. Direction of attack is a more restrictive control measure than axis of advance, and units are not free to maneuver off the assigned route. It is usually associated with infantry units conducting night attacks, or units involved in limited visibility operations, and in counterattacks.

Axis of Advance. (See Letter "G"). The axis of advance is depicted as a hollow arrow. It shows the general route of advance, assigned for purposes of control, which extends toward the enemy. The axis of advance is not as restrictive as the arrows used for direction of attack or route of march. The commander may maneuver to either side of an axis, providing he does not interfere with the maneuver of adjacent units. An axis of advance is not used to direct the control of terrain or the clearance of enemy forces from specific locations. Intermediate objectives normally are assigned for these purposes.
Restrictive Fire Support Coordination Measures

Restrictive fire support coordination measures are used to control fires of units. Several types of control measures are as follows:

- Restrictive Fire Line (RFL).
- Restrictive Fire Area (RFA).
- No Fire Area (NFA).
- Limit of Advance (LA).
- Boundaries.

Figure 14 illustrates each of the restrictive fire support coordination measures. Refer to the figure as each of these measures is discussed.

Restrictive Fire Line (RFL). The purpose of the RFL is to prevent interference between converging friendly forces. It is a red line drawn between converging friendly forces of which one or both may be moving (see Letter "A"). The RFL prohibits fires or effects from fires across the line without coordination with the affected force.
Restricted Fire Area (RFA). The purpose of the RFA is to regulate fires into an area according to the stated restrictions (see Letter "B"). The RFA is drawn in red. Fires that exceed those restrictions will not be delivered without coordination with the establishing headquarters.

No Fire Area (NFA). The NFA is an area, drawn in red with diagonal lines, in which no fire or the effects of fire are allowed (see Letter "C"). Two exceptions include:

- When establishing headquarters approves fires (temporarily) within the NFA on a mission basis.
- When an enemy force within the NFA engages a friendly force, the commander may engage the enemy to defend his force.

Limit of Advance (LOA). Limit of advance lines are shown by solid lines labeled LA (see Letter "D"). They are used as a control measure to limit the advance of a force in a specific area. The area should be clearly recognizable on the ground and on a map.

Now that we have examined offensive overlay techniques and restrictive control measures, let us direct our attention to some techniques peculiar to defensive operations.

Overlay Techniques (Defense)

Use Figure 15 as a reference when examining defensive overlay techniques. The specific areas that we will focus on include the following:

- Defensive positions.
- Boundaries.
- Coordinating points.
Defensive Positions. In defensive situations, the terrain is divided into three main areas:

- The Covering Force Area (CFA). (see Letter "A"). In the defense, the CFA is the operational area between the forward edge of the battle area (FEBA) and the forward line of own troops (FLOT).

- The Main Battle Area (MBA). (See Letter "B"). The MBA is that portion of the battlefield extending rearward from the FEBA and in which the decisive battle is fought to defeat the enemy attack. Designation of the MBA includes the use of lateral and rear boundaries. For any particular command, this area extends from the FEBA to the rear boundaries of those units compromising its main defensive forces.

- The Division Support Area (DSA). (See Letter "C"). The DSA is an area normally located in the division rear positioned near airdropping facilities and along the main supply route (MSR). The DSA contains the division support command post (DISCOM CP), the HQ elements of the DISCOM battalions, and those
DISCOM elements charged with providing backup support to the combat service support (CSS) elements in the brigade support area (BSA) and direct support (DS) to units located in the division rear. Selected corps support command (COSCOM) elements may be located in the division support area (DSA) to provide DS backup and general support (GS) as required.

Boundaries. A boundary is a control measure normally drawn along identifiable terrain features and is used to delineate areas of tactical responsibility for subordinate units. Within their boundaries, units may maneuver within the overall plan without close coordination with neighboring units unless otherwise restricted. Direct fire may be placed across boundaries on clearly identified enemy targets without prior coordination, provided friendly forces are not endangered. Indirect fire also may be used after prior coordination. There are two types of boundaries - lateral and rear:

- Lateral boundaries are used to control combat operations of adjacent units. They are lines with a symbol placed on the boundary to show the size and destination of the highest echelons that have the boundary in common.

Example: Lateral Boundary

- Rear boundaries are established to facilitate command and control (C2). When used, a rear boundary shows the size symbol for the smaller or subordinate unit rather than that of the larger unit of which it is a part.

Example: Rear Boundary

Passage Points. A passage point is a place where units will pass through one another either in an advance or withdrawal. It is located where the commander desires subordinate units to physically execute a passage of line.

Example: Passage Point
Coordinating Points. Coordinating points are shown by a circle with an "X" in the center (see Letter "D", Figure 15). Coordinating points are control measures that indicate a specific location for the coordination of fires and maneuver between adjacent units. They are usually indicated whenever a boundary crosses the FEBA, and may be indicated when a boundary crosses report lines or phase lines (PLs) used to control security forces. In NATO physical contact between adjacent units is required.

Mines. The mines that are depicted in Figure 14 are antipersonnel and antitank mines. Antitank mines are symbolized by a blackened circle, and antipersonnel mines are symbolized by a blackened circle with two lines radiating from the top. Mines may be depicted singly, in rows, or in a series of rows that form a mine field. Boundaries of a minefield are drawn to scale to indicate the actual extent of the field. The number shown in the rectangle that is placed above the minefield symbol indicates the actual total number of mines.

Permissive Five Support Coordination Measures

Permissive five support coordination measures include the Coordinated Fire Line (CFL), Fire Support Coordination Line (FSCL), and Free Fire Area (FFA). Use Figure 16 as a visual reference as we examine the CFL, FSCL, and FFA.
Coordinated Fire Line (CFL). (See Letter "A"). A CFL (denoted by a broken black line) may or may not appear on the operation overlay, but must appear on target overlays, situation maps, and firing charts of all supporting artillery. DTG indicates the time the CFL becomes effective. The CFL is a line beyond which conventional surface fire support means (mortars, field artillery, naval gunfire ships) may fire at any time within the zone of the establishing HQ without additional coordination. It is usually established by brigade or division, but may be established by a maneuver battalion. (The term "no-fire line" is used by ether NATO nations for a CFL.)

Fire Support Coordination Line (FSCL). (See Letter "B"). An FSCL is designated by a black line extending across the assigned areas of the establishing headquarters. The indicator of the establishing headquarters is shown after the letters FSCL. The FSCL is a line established by the appropriate ground commander to ensure coordination of fire not under his control but which may affect current tactical operations. The FSCL is used to coordinate fires of air, ground, or sea weapons systems using any type of ammunition against surface targets. The FSCL should follow well defined terrain features. The establishment of the FSCL must be coordinated with the appropriate tactical air commander and other supporting elements. Supporting elements may attack
targets forward of the FSCL, without prior coordination with the ground force commander, provided the attack will not produce adverse surface effects on, or to the rear of the line. Attacks against surface targets behind this line must be coordinated with the appropriate ground force commander.

Free Fire Area (FFA). (See Letter "C"). The FFA is a designated area outlined in black. It is a specific designated area into which any weapon system may fire without additional coordination with the establishing headquarters.

Summary

One of the major benefits that an operation overlay provides is simplification in portraying the tasks and instructions of a commander to his subordinate commanders. An operation overlay augments the written portion of the order and promotes clarity, accuracy, and brevity by conveying instructions graphically. The following overlay techniques are included in the offensive overlay:

- Objectives.
- Boundaries.
- Phase lines.
- Lines of departure.
- Locations of units.
- Command posts.
- Reconnaissance units.
- Routes and axis if applicable.

Restrictive control measures include the Restrictive Fire Line (RFL), No Fire Area (NFA), and Limit of Advance (LOA). All are depicted on the overlay by the respective abbreviations.

Defensive overlays include defensive positions, boundaries, and coordinating points, and can delineate:

- The Covering Force Area (CFA).
- The Main Battle Area (MBA).
- The Division Support Area (DSA).

Permissive fire support coordination measures include the coordinated Fire Line (CFL), Fire Support Coordination Line (FSCL), and Free Fire Area (FFA).
Now that you have completed the second learning event, test yourself with these review questions. Check your answers against the feedback section. Refer to the learning event if you have any questions.

Use the following figure to answer questions 1 and 2.

1. Which of the above encircled letters represents an objective?
   a. Letter A.
   b. Letter B.
   c. Letter C.
   d. Letter D.
2. Which of the encircled letters on the previous page represents the location of a unit?
   
   a. Letter C.
   b. Letter D.
   c. Letter G.
   d. Letter B.

3. In defensive situations, the terrain is divided into three main areas. Which of the following is not one of those areas?
   
   a. Covering Force Area (CFA).
   b. Main Battle Area (MBA).
   c. Rear area.
   d. No Fire Area (NFA).
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LESSON 2

LEARNING EVENT 2

PRACTICAL EXERCISE FEEDBACK

1. Answer a is correct.

Answer a is correct. Objectives are depicted by solid "goose eggs" as shown by Letter A in the figure.

Answer b is incorrect. Boundaries are shown by a solid line, as noted by Letter B in the figure.

Answer c is incorrect. Phase lines are shown by solid lines drawn perpendicular to the direction of advance or withdrawal and are labeled "PL" and are given a letter, number, or code name designation. See Letter C in the figure.

Answer d is incorrect. Locations of units (Letter D) are indicated by a solid "goose egg" with the unit symbol or command post symbol to show the location of the reserve units.

2. Answer b is correct.

Answer a is incorrect. Letter C depicts phase lines.

Answer b is correct. Letter D indicates locations of units. They are depicted by a solid "goose egg" with the unit symbol or command post symbol to show the location of the reserve units.

Answer c is incorrect. Letter G depicts the axis of advance.

Answer d is incorrect. Letter B depicts boundaries.

3. Answer d is correct.

Answer a is incorrect. The Covering Force Areas (CFA) is one of the main areas of a defensive overlay.

Answer b is incorrect. The main battle area (MBA) is one of the main areas of a defensive overlay.

Answer c is incorrect. The division rear area is one of the main areas of a defensive overlay.

Answer d is correct. The No Fire Area (NFA) is not one of the main areas of a defensive overlay. The NFA is a restrictive coordinating measure.
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CONTAINING INFORMATION FROM IS7004A

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