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DEPARTMENT OF THE ARMY FIELD MANUAL

DIVISIONAL AVIATION BATTALION AND GROUP

HEADQUARTERS, DEPARTMENT OF THE ARMY
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HEADQUARTERS
DEPARTMENT OF THE ARMY
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DIVISIONAL AVIATION BATTALION AND GROUP

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PART ONE

GENERAL

CHAPTER 1

INTRODUCTION

1–1. Purpose and Scope

a. This manual provides doctrine and guidance for commanders, staff officers, and other personnel concerned with the operation of the divisional Army aviation battalion and group. It discusses the mission, organization, capabilities, limitations, and internal operations of these units and their relationship to supported units. (FM 55–46 contains details on Army aviation transport services and units.)

b. The manual provides guidance for—

(1) Nuclear and nonnuclear warfare.

(2) Employment of and protection from chemical, biological, and radiological agents.

(3) Internal defense and development operations.

1–2. Recommendations To Improve Clarity or Accuracy

Users of this manual are encouraged to submit recommendations to improve its clarity or accuracy. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded directly to the Commanding Officer, United States Army Combat Developments Command Aviation Agency, Fort Rucker, Ala. 36360. Originators of proposed changes which would constitute a significant modification of approved Army doctrine may send an information copy, through command channels, to the Commanding General, USACDC, to facilitate review and followup.

CHAPTER 2

BATTALION AND GROUP

2–1. General

a. This manual gives doctrinal coverage to the aviation battalion and group organically assigned to active divisions of the United States Army. It is divided into three parts. Part One provides introductory material. The scope of Part Two and Part Three is found in paragraphs 2–2 and 2–3.

b. FM 1–105 covers the techniques and procedures used by the Army aviator and FM 1–110 discusses the employment of the armed helicopter. FM 1–100 provides general guidance and doctrine for U.S. Army aviation utilization.

2–2. Divisional Aviation Battalion

Part Two of this manual is based on the aviation battalion, airborne division (TOE 1–55G), and the aviation battalion, infantry division (TOE 1–75G). Since these battalions are identical in mission and practically identical in organization, they are treated as having a single identity except where certain differences are pointed out as they arise. The doctrinal principles applying to these organizations are generally applicable to all Army aviation battalions.

2–3. Aviation Group, Airmobile Division

Part Three contains a discussion of the mission, composition, and functions of the aviation group organic to the airmobile division (TOE 1–100T). Major subordinate elements of the aviation group covered in the manual include the—

a. Headquarters and headquarters company (TOE 1–101T).

b. General support aviation company (TOE 1–102T).

c. Assault helicopter battalion (TOE 1–155T).

d. Assault support helicopter battalion (TOE 1–165T).

PART TWO

DIVISIONAL AVIATION BATTALION

CHAPTER 3

INTRODUCTION

3-1. Mission

The mission of the divisional aviation battalion (TOE 1-55G and TOE 1-75G) is to provide aviation support for the division headquarters, division support command, and other divisional units without organic aircraft. In addition, the battalion provides—

a. General support and reinforcement to units possessing organic aircraft.

b. An aviation special staff section for the division.

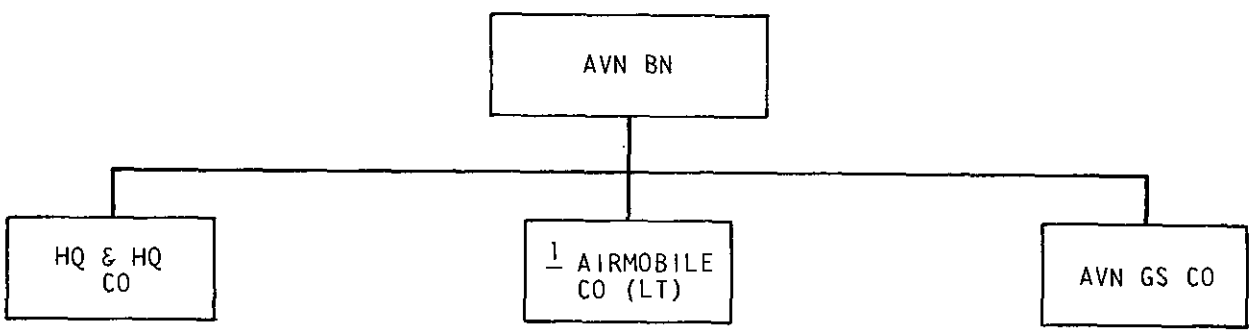
3-2. Composition

The composition of the divisional aviation battalion is shown in figure 3-1. Figures 3-2, 3-3, and 3-4 show the organization of the battalion's major subordinate units.

3-3. Capabilities and Limitations

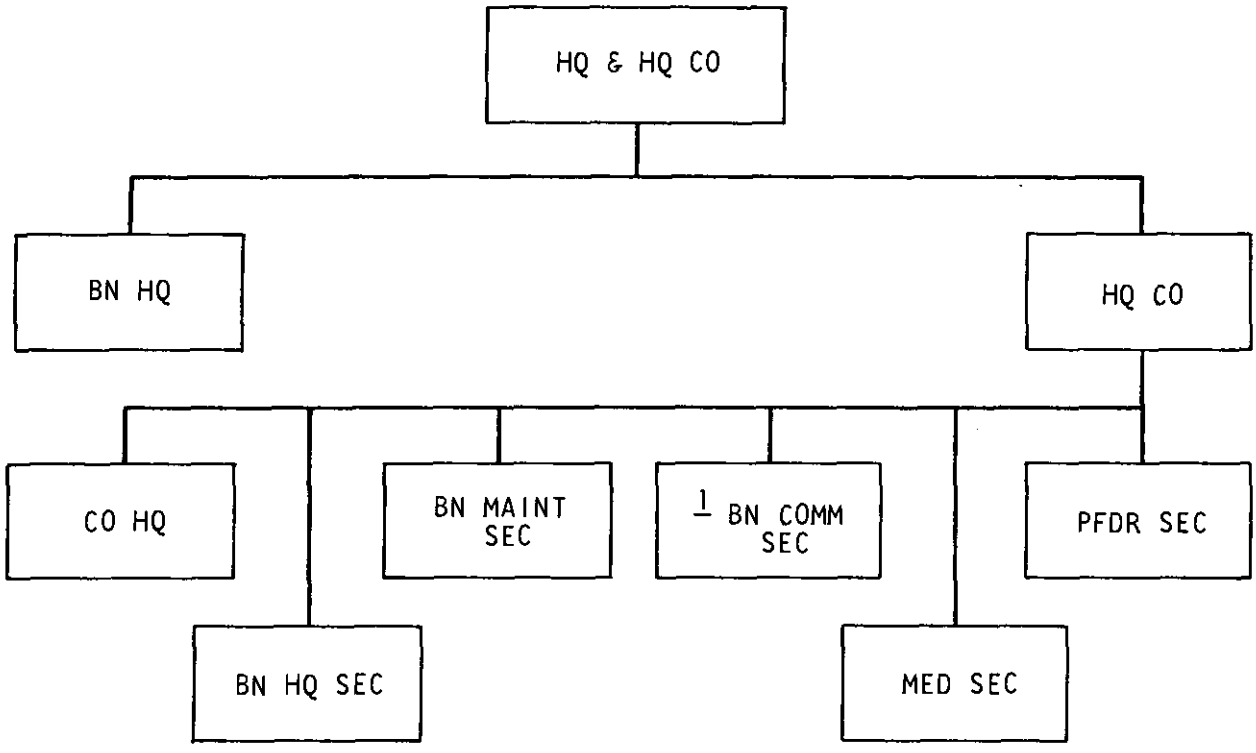
a. Capabilities. The aviation battalion is capable of operating throughout the spectrum of warfare. It provides a means of supplementing the land combat functions of intelligence; mobility; firepower; command, control, and communications; and service support. The TOE of each unit lists the specific capabilities of that unit.

b. Limitations. The aviation battalion has limited ability to defend itself while performing operations. It is further limited by its large requirement for aviation fuel, its sensi-



[1] In the airborne division, this company is named the light airmobile company.

Figure 3-1. Divisional aviation battalion.



1 Includes airfield control personnel. In the airborne division, an airfield terminal control section is authorized.

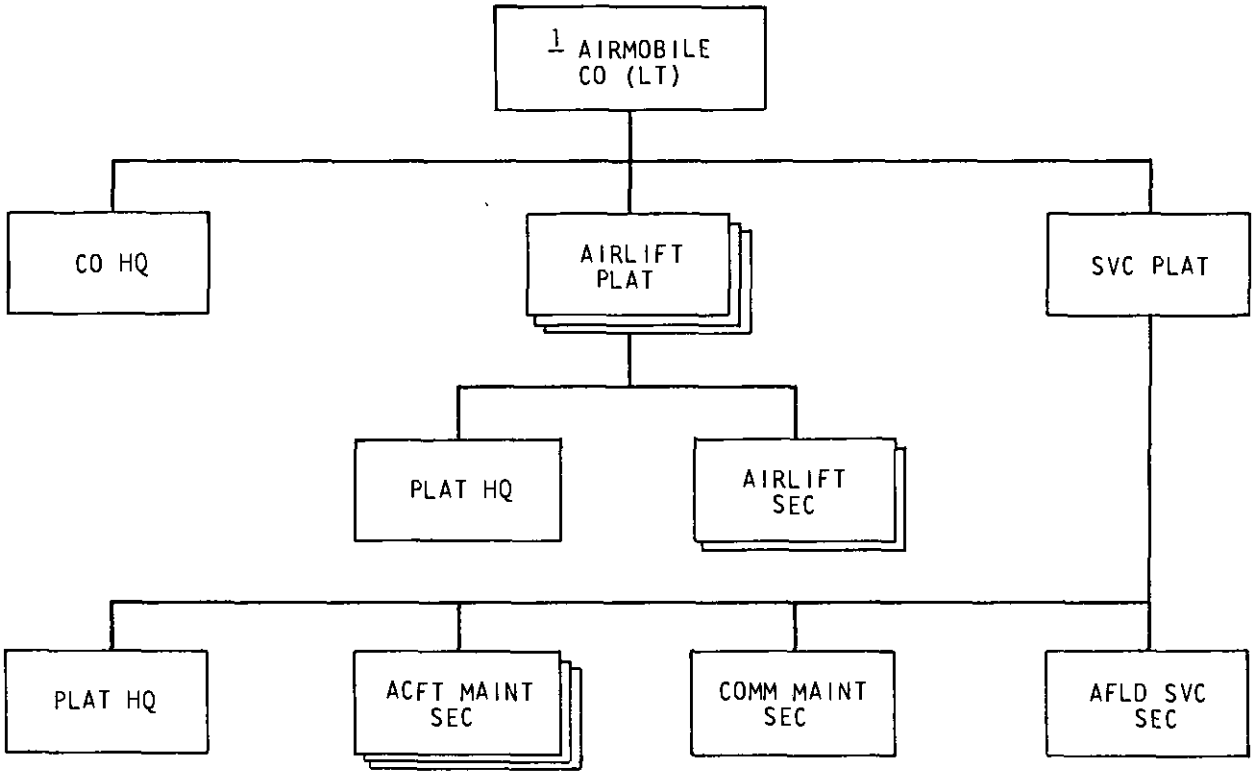
Figure 3–2. Headquarters and headquarters company, aviation battalion.

tivity to adverse weather conditions, and its vulnerability to overpressures caused by nuclear explosion. When operating in semistatic positions as part of a larger base camp complex in internal defense/development operational environments, the aviation battalion will require additional support to include security forces, POL storage personnel, engineers, and other installation support personnel.

3–4. Employment

a. General. The aviation battalion is designed to provide aviation support to Army forces in the combat zone. It has the ability to overcome a variety of obstacles to the movement of ground combat elements and contributes to the mobility and maneuverability of those forces in offensive actions. In defense, retrograde, or denial operations, an aviation battalion can help impede the progress of enemy ground forces by providing timely intelligence, by delivering troops and supplies to sustain positions held by friendly elements, and by transporting forces to block critical avenues of approach. The efficient employment of an aviation battalion is accomplished when its capabilities are used with those of the supported organization to provide a balance among the land combat functions (para 3–3).

b. Command Relationship. The command relationship established between the ground unit and the supporting aviation unit depends upon the mission or degree of control directed by the higher headquarters. The degree of control de-



[1] In the airborne division, this company is named the light airmobile company.

Figure 3–3. Airmobile company (light), aviation battalion.

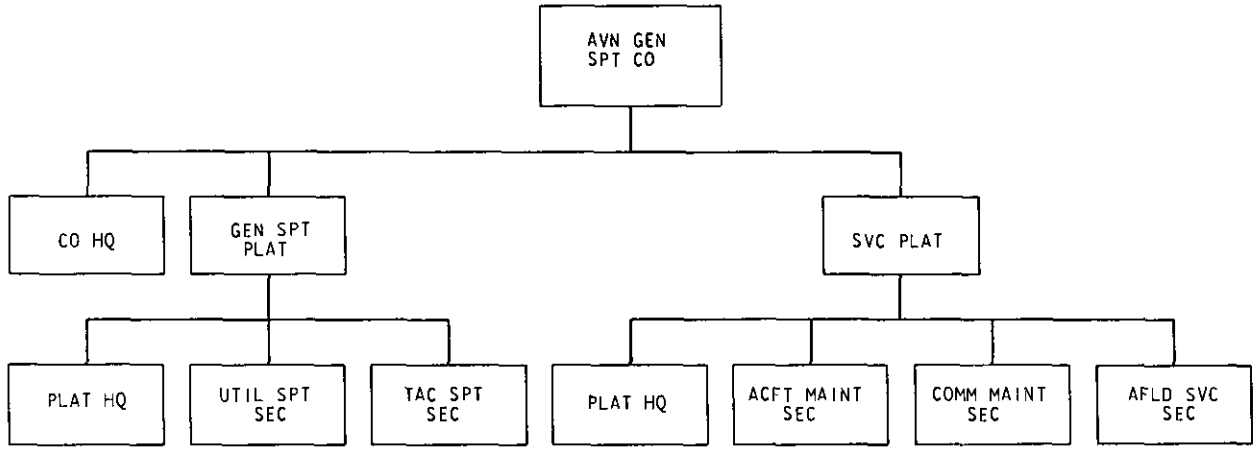


Figure 3–4. Aviation general support company, aviation battalion.

pends on the capability of the ground unit to plan, coordinate, control, and logistically support the aviation unit. Normally, an aviation battalion or an element thereof is controlled by its parent unit and is placed in support of the ground unit, with operational control of both units retained by the headquarters which directs and supports the operation.

c. Basic Factors. Factors on which employment of the aviation battalion is based include—

(1) Mission of the ground combat force.
(2) Plan of maneuver of the ground combat force and its mobility requirements.
(3) Number and type of aviation units available.
(4) Capabilities of aviation units.
(5) Availability of airfield and bivouac areas.
(6) Availability and suitability of aviation support from other sources, to include the U.S. Air Force and Navy.
(7) Availability and expected expenditure of aviation POL and armament.
(8) Enemy intelligence, particularly the air defense and air offense capability.
(9) Operational agreements relating to other allied forces and host country forces in an internal defense/development operational environment.
(10) Weather and terrain.

d. Operational Status. The battalion normally is not employed as a unit. Elements of the battalion are attached to, placed under the operational control of, or placed in support of other units of the division. The headquarters and headquarters company is normally located with the aviation general support company at the division instrumented airfield. The light airmobile company is usually employed as a unit, but can be tailored into smaller elements to fit the situation. This company operates from its own dispersal area and should be located so that it can obtain air traffic regulation and terminal air support from the main instrumented airfield. When the requirement for aviation support within the division exceeds the capability of the divisional aviation battalion, additional aviation support can be provided from nondivisional aviation resources of higher headquarters. Aviation units attached to the division may be further attached to the division aviation battalion when their mission necessitates close control by that echelon.

CHAPTER 4

COMMAND AND STAFF

Section I. COMMAND

4-1. General

The aviation battalion commander exercises his authority and promotes continuity throughout the battalion by prescribing policies, assigning missions, and designating tasks for units under his control. Effective operation of this chain requires that sufficient authority be delegated to enable subordinates to accomplish tasks for which they are responsible. The commander conducts personal visits and inspections to insure that his standards are understood and satisfactorily maintained.

4-2. Commander's Responsibilities as Aviation Staff Officer

The commander of the divisional aviation battalion is assigned the additional duty of division aviation officer. In this capacity, he is responsible for informing and advising the division commander and staff on the technical aspects of aviation and the employment of elements of the battalion. In addition he—

a. Maintains liaison with aviation representatives and staff officers of higher and lower headquarters and with adjacent units.

b. Prepares and supervises the aviation portion of the division training program and provides technical supervision of aviation training for other elements of the division.

c. Supervises the employment of aviation elements assigned or attached to the division for tactical operations. He exercises operational control over these units except when operational control is specifically delegated elsewhere by the division commander.

d. Assists the staff in the preparation of aviation portions of division estimates, plans, orders, and reports.

e. Prepares the aviation portion of the air movement plan and the fire support plan.

f. Coordinates the use of airspace with the air defense officer.

4-3. Assistant Aviation Officer

An assistant aviation officer is authorized in each divisional aviation battalion. He is located at the division tactical operations center (DTOC) and is the principal representative of the division aviation officer on the division special staff. Normally, he is charged with the responsibility of supervising the Army aviation element (AAE) of the DTOC for the division aviation officer (battalion commander) and, as directed, performs those duties of the division aviation officer noted in paragraph 4-2. He keeps abreast of the division tactical disposition and future plans, and advises the division aviation officer on these matters. Although his specific duties vary, depending on the desires of the division aviation officer, he normally prepares pertinent annexes to division operations orders, administrative orders, estimates, plans, and reports.

4-4. Command Staff Relationships

The staff is responsible to the commander for acquiring information; making recommendations; preparing estimates, detailed plans, and orders implementing command decisions; and coordinating plans and operations. The commander maintains close relationship with his staff officers and keeps them fully informed. He establishes definite functional responsibilities for his staff, delegates authority commensurate with responsibilities, and charges the executive officer with responsibility for directing and coordinating the staff.

4-5. Command Relationship With Subordinate Unit Commanders

The battalion commander's relationship with the commanders of organic and attached units is direct and personal. He encourages them to work with his staff and to deal directly with him when appropriate. He makes formal and informal visits to subordinate units, including attached units, to gain direct knowledge of the unit situation and the status of the troops operating with the battalion. The commander insures that adequate communications and liaison are maintained to keep commanders of supporting and supported units informed of the current situation and the support needed or available. The supporting unit is required to establish communications with the supported unit. If a conflict arises, the supporting unit initiates compliance, concurrently referring the matter to its parent headquarters. The commander of the supporting unit advises the commander of the supported unit of his unit's capabilities and limitations and recommends the method of employing his unit.

4-6. Command During Operations

a. The aviation battalion commander formulates plans, issues, orders, and supervises the operations of all units organic to the battalion or under his operational control. He takes action to obtain additional personnel, equipment, or other support required to accomplish the mission. He coordinates the activities of his unit with those of adjacent, higher, and lower units.

b. The commander goes where he can best direct, control, and influence the operation. He may be with the command group element, at his command post (CP), in an aerial CP, or anywhere in the area of operations where his presence is required. Before departing the CP, he informs his staff on plans to be made or actions to be taken if the situation changes. When he is away, he insures that he can communicate with the CP and subordinate commanders. While away from the CP, if he issues orders or obtains pertinent information on the situation, he informs his staff without delay.

Section II. AVIATION BATTALION STAFF

4-7. General

a. The battalion staff consists of the executive officer, battalion staff officers, special staff officers, and the sergeant major.

b. Staff officers assist the battalion commander in the exercise of command. They transmit the commander's orders to subordinate units and relieve him of time-consuming details. Through coordination with the Army aviation element of the tactical operation center, the staff maintains information pertaining to—

(1) Location, current and projected availability, and current and projected use of organic, assigned, attached, and supporting units.

(2) Status of logistics and administration. Based upon this information, the staff makes recommendations to the commander. When a decision is made, staff members assist in the preparation of orders and supervise their implementation.

(3) Capabilities, strength, location, and composition of enemy forces.

c. The successful functioning of the staff depends upon close coordination among its members and among the staff members and units of the command. This coordination includes teamwork with staffs of higher headquarters and supporting units. Conferences and personal contact promote coordination and cooperation. Staff officers must know the duties and responsibilities of other members of the staff so that they may assume such duties in case of emergency. The staff should be organized to operate on a 24-hour basis.

d. A staff officer must remember that he is not the commander of the battalion subordinate units; he acts only in the name of the commander for whom he works. Staff officers visit subordinate units to gain current knowledge of

unit situations and administrative conditions. Commanders or their representatives are contacted personally as the first and last steps of each visit. Conditions which are contrary to policies are called to the attention of unit commanders. Details not requiring a command decision may be settled with the unit commander at the time of the visit. Concise reports of facts are provided the battalion commander following such staff visits.

e. FM 101–5 contains details of staff officer functions.

4–8. Relationships of Battalion Staff Officers to Special Staff Officers and Subordinate Commanders

a. The battalion staff officers are the executive officer, S1, S2, S3, and S4. Battalion staff officers insure that the special staff is informed on plans, policies, and decisions of the commander. They obtain information, estimates, and recommendations from the special staff and subordinate commanders and use this data in preparing reports, estimates, recommendations, and plans for the commander. All staff officers keep each other informed on matters of mutual interest.

b. A special staff officer makes recommendations directly to the commander. The special staff officer should inform the appropriate staff officers of the information exchanged when it affects their field of interest.

c. Subordinate commanders are afforded direct contact with the commander. When time permits, the commander will call upon leaders of organic and attached units for estimates and recommendations pertaining to their units. The commander uses this information together with data from his staff as the basis for estimates and decisions.

4–9. Executive Officer

The executive officer is the principal assistant and advisor to the battalion commander. Although his specific duties vary depending on the desires of the commander, he normally performs duties similar to those of the chief of staff at the general staff level. The executive officer is charged with the responsibility for execution of staff tasks, the efficient and prompt response of the staff, and the coordinated effort of staff members. He transmits the commander's decisions to the staff sections and to subordinate units, when applicable, in the name of the commander. He keeps abreast of the situation and future plans, and acts for the commander in his absence. He is prepared to assume command of the battalion at any time. Normally, the executive officer is located at the CP and is responsible for its operation. He and the commander should not be absent from the CP at the same time. In the displacement of the CP, the executive officer usually closes the old CP and moves with the last echelon of the headquarters.

4–10. Adjutant (S1)

The adjutant (S1) performs the functions of the G1 of the general staff type organization, the functions of the secretary of the general staff, the functions of the commander's personal staff, and the personnel functions of special staff officers who are not assigned in the battalion staff such as the adjutant general, inspector general, judge advocate, provost marshal, and special services officer (FM 101–5). Specifically, the adjutant (S1)—

a. Consolidates and forwards information on the assignment, promotion, transfer, retirement, and discharge of personnel.

b. Processes awards of decorations, citations, commendations and other honors.

c. Processes applications for leave.

d. Maintains records and current information on military justice including Article 15 punishments, processes and reviews court-martial (CM) charges and records of trial by inferior courts-martial for administrative correctness, and recommends to the commander measures to improve discipline.

e. Maintains current information on strength to include loss estimates and casualty records. He makes arrangements for receiving, processing, assigning, and quartering replacements.

f. Sets up internal arrangement of the CP in coordination with the battalion signal officer.

g. Consolidates data submitted for inclusion in the unit SOP and maintains that portion of the SOP which governs unit and CP operating procedures.

h. Is responsible for the collection, processing, and evacuation of prisoners of war.

i. Is responsible for postal and message center services.

j. Publishes and authenticates orders and instructions of the commander, except combat orders.

k. Supervises athletics, entertainment, and other morale-building activities when no other officer is designated for such duties.

l. Is responsible for all administrative matters not assigned to another staff officer.

m. Coordinates the evacuation of casualties including patients.

n. Acts as administrator of civilian services, providing liaison with civilian employers and the local government in the affairs of the camp and its personnel in internal defense and development operations.

4–11. Intelligence Officer (S2)

The intelligence officer (S2) performs the functions of G2 of the general staff type organization (FM 101–5). He is primarily responsible for advising the commander, staff, subordinate units, and other interested agencies on the terrain, weather, and the enemy situation and capabilities. Specifically, the S2—

a. Obtains and disseminates information on the terrain and weather.

b. Supervises and trains battalion intelligence personnel, and exercises control over them during operations.

c. Plans and supervises intelligence and counterintelligence training for all personnel of the battalion.

d. Prepares the battalion intelligence plan and informs the G2 of its intelligence requirements.

e. Monitors flight crew briefings and debriefings.

f. Records pertinent enemy information and physical hazards to flight on the situation map.

g. Receives and forwards to higher headquarters information collected by elements of the battalion.

h. Disseminates intelligence received from higher headquarters to the commander, staff, and subordinate elements.

i. Determines requirements for and supervises distribution of maps, airphotos, image interpretation reports, and photomaps.

j. Monitors aerial observation, reconnaissance, and surveillance missions between the division G2 and the aviation general support company of the aviation battalion.

k. Works with host country military and civilian staffs and intelligence gathering agencies in internal defense and development operations.

4–12. Operations and Training Officer (S3)

The operations and training officer (S3) performs the functions of the G3 on the general staff type organization (FM 101–5). He is primarily responsible for advising the commander on organizations, training, and operations. Specifically, the S3—

a. Prepares recommended changes to tables of organization and equipment and recommends attachment or support of units which will facilitate the accomplishment of the mission.

b. Assigns priorities for unit personnel requirements (coordinating with the S1).

c. Prepares and has staff supervisory responsibility for the execution of training directives, programs, orders, field exercises, and maneuvers based on plans approved by the commander.

d. Selects training areas and ranges, and allocates training aids and equipment.

e. Prepares the program of instruction and organizes and supervises schools for the battalion to include individual and unit flight training programs.

f. Makes training inspections, and prepares and supervises training tests based on Army training tests (ATT).

g. Informs his commander and other staff officers on the situation and makes recommendations on the employment of the battalion.

h. Supervises the posting of friendly unit dispositions on the situation map.

i. Recommends the general location of organic and attached units and their employment.

j. Coordinates with the signal officer in the preparation of the signal communications plan.

k. Plans tactical movements, including units involved, formation, and type of transportation required (coordinating with S4). He prepares the movement order and march tables after the plan of movement is approved.

l. Prepares the battalion operation order for the commander's approval. He coordinates with the S1, S2 and S4 for their input to the order. If the operation order is given verbally by the commander, the S3 writes a complete order, often in pencil form, and files it.

m. Prepares plans for future and contingency operations.

n. Recommends the S1 and S4 priorities for allocation of administrative and logistic support to subordinate units.

o. Prepares plans to implement civil affairs functions delegated to the battalion (FM 41–10).

p. Prepares and maintains necessary records and reports.

q. Coordinates with the S4 to determine the status of the materiel readiness program.

r. Coordinates operations and plans with allied and host country military staffs and their advisors for internal defense and development operations.

s. Prepares security and defense plans for the installation during internal defense and development operations in coordination with the S2.

t. Prepares the battalion field SOP in coordination with other staff officers.

u. Recommends locations and dissemination media (to include loudspeakers or leaflets) for psychological operations.

v. Recommends the general location of the CP (in coordination with the signal officer).

4–13. Logistics Officer (S4)

The logistics officer (S4) has staff responsibility for planning, coordinating, and supervising the operation of the logistical facilities of the battalion. He insures that organic and nonorganic administrative service support elements adequately support the plans of the command and that they function according to the orders of higher commanders. The duties of the S4 are similar to those prescribed for the G4 of the general staff type organization (FM 101–5). Specifically, the S4—

a. Coordinates with higher headquarters logistics officers, appropriate support command, or supporting supply unit on supplies for the battalion. He also determines the supply requirements of organic and attached units.

b. Coordinates priorities of issue as established by higher headquarters and the S3.

c. Supervises procurement and distribution of supplies.

d. Keeps subordinate units informed of the location of the logistical installation.

e. Coordinates with the maintenance battalion commander and the commander of the supporting transportation aircraft direct support company on maintenance, repair parts supply, evacuation, and technical assistance requirements.

f. Coordinates the evacuation of damaged equipment and weapons, salvage, and captured enemy materiel.

g. Coordinates additional transportation services required for the battalion.

h. Coordinates with the S3 to determine the status of the materiel readiness program.

i. Prepares the battalion logistical plan and the logistical portion of operation orders.

j. Supervises the upkeep of the camp or installation and its facilities, and operates much as a post engineer when the battalion is deployed in a semistatic position, as in an internal defense/development operational environment.

k. Coordinates chemical, biological, and radiological decontamination of equipment, supplies, and facilities.

l. Requests and procures maps.

4–14. Special Staff

a. General. Special staff officers normally have knowledge and/or training in special areas included in, but more specialized than, the broad fields of interest of the battalion staff officers and largely relating to technical, administrative, and branch matters. Special staff officer activities may be directly supervised by the battalion executive officer or by the staff officer having primary interest in the field of the special staff officer's activities. This decision is left to the commander whose primary concern is to gain a working relationship among the staff that insures continuity of effort without creating unnecessary links in the chain of communications.

b. Surgeon. The surgeon is a medical officer qualified as an aviation medical officer or flight surgeon; he is assigned to the battalion headquarters under the staff supervision of the S1. He has direct access to the commander; however, he works closely with members of the battalion staff in matters directly affecting the health of the command; medical care of troops; and the proper employment of medical personnel, equipment, and supplies. In an internal defense situation, the surgeon can initiate a military civic action program by providing medical services, dispensary facilities, advice to local doctors, and possibly an airmobile visiting dispensary. Within the battalion, the surgeon exercises operational control over the medical section and, as the division aviation medical officer, performs these duties for all organic division and attached aviation units. Specifically, the aviation battalion surgeon—

(1) Maintains the aviation medical program and insures that all rated aviation personnel in the battalion are physically qualified for flight missions.

(2) Prepares a battalion medical plan based upon higher headquarters medical plan and the situation.

(3) Recommends a site for location of the battalion aid station, supervises its operations, and supervises the care and treatment of patients.

(4) Develops policies and procedures concerning medical functions to include the supervision of training troops in sanitation and first aid.

(5) Requisitions medical supplies and equipment from the division medical battalion or nearest medical unit with this support capability.

(6) Examines foodstuffs and water to determine suitability for consumption after exposure to possible contamination by chemical, biological, or radiological agents.

(7) Supervises the evacuation of patients to the battalion aid station.

(8) Prescribes treatment procedures and insures that facilities are available for treatment of patients as a result of chemical and biological operations or nuclear warfare.

(9) Insures that emergency medical equipment and supplies are provided to battalion personnel as required.

(10) Maintains a preventive medicine program to preserve maximum individual and unit efficiency.

(11) Arranges evacuation for those patients requiring treatment beyond the capability of the battalion aid station to the next level of medical treatment.

(12) Serves as a member of aircraft accident investigation and flight evaluation boards.

(13) Formulates, supervises, and coordinates all medical aspects of the aviation safety program with appropriate commanders and staff officers.

c. Signal Officer. The signal officer supervises the communication section and, as a special staff officer, coordinates and exercises technical supervision over the training and activities of communications personnel throughout the battalion. He prepares, plans, and makes recommendations for the employment of signal com-

munications to include ground and aircraft communications systems. Specifically, the signal officer—

(1) Supervises the installation of radio, wire, and terminal flight and control facilities at the battalion instrumented airfield.

(2) Coordinates with appropriate flight operations center (FOC) and flight coordinating centers (FCC) on pertinent communications matters.

(3) Coordinates with the S3 for selection of the general location and with the S1 for internal arrangement of the battalion CP.

(4) Coordinates with the S2 on communications security measures.

(5) Obtains current signal operation instructions (SOI) and standing signal instructions (SSI) from higher headquarters. He prepares and distributes extracts of SOI and SSI.

(6) Prepares the communications portion of the battalion SOP.

(7) Submits recommendations for paragraph 5 of the operation order and for signal annexes when required.

(8) In coordination with the S4, plans and supervises matters pertaining to signal supply plans and supervises matters pertaining to signal supply and maintenance.

(9) Supervises the installation, operation, and maintenance of the signal equipment issued to the communications section and the battalion headquarters.

(10) Procures, stores, and distributes codes, ciphers, and cryptographic material.

d. Maintenance Officer. The maintenance officer supervises the maintenance section and, as a special staff officer, advises the battalion commander on capabilities of operating units' organizational maintenance sections to meet current and projected workloads. He advises the staff and subordinate commanders within the command on the technical aspects of aircraft, vehicle, and equipment operations and maintenance. He maintains liaison with the supporting maintenance and supply units and with the operating units of the aviation battalion to insure an effective direct support maintenance schedule. He coordinates his activities with the S4 and keeps him advised on the maintenance status within the battalion. Specifically, the maintenance officer—

(1) Has staff supervision for inspection and administers technical guidance for all organizational maintenance performed within the battalion.

(2) Provides staff supervision of the performance of airfield services at the aviation battalion airfield.

(3) Supervises the operations of the battalion motor maintenance technician.

(4) Furnishes staff supervision for the receipt, issue, stockage, storage, and turn-in of repair parts and equipment.

(5) Monitors and has staff supervision for the preparation of maintenance records, schedules, and reports of subordinate units.

e. Aviation Safety Officer. The aviation safety officer advises the battalion commander, staff, and subordinate units on safety aspects related to their individual functions with particular emphasis on aviation safety. He receives and disseminates safety directives or programs from higher headquarters, and implements and supervises the battalion safety program in accordance with Army directives. He may be designated as division aviation safety officer, under the staff supervision of the division aviation officer, for all organic division and attached aviation units. (The GI has staff responsibility for all division safety.) Specifically, the aviation safety officer—

(1) Reviews, monitors, and maintains records and statistics of accident or incident reports to detect trends and recommend corrective measures.

(2) Prepares and monitors the battalion safety program for accident prevention.

(3) Prepares training programs for accident investigation boards and teams (in coordination with S3) and advises

board members during an investigation.

(4) Advises staff members on inclusion of safety information in battalion directives, policies, programs, and training.

(5) Inspects aviation battalion headquarters and subordinate units to determine the status of accident prevention within the battalion.

(6) Conducts surveys of unit airfields and facilities to insure that they meet the designated operational and safety requirements.

(7) Reviews aviator flight records and unit training programs to insure that training is directed to known deficiencies.

(8) Insures adequate distribution of flight safety literature to organic division and attached aviation units.

(9) Informs the commander of unsafe conditions that exist within the organization and recommends corrective actions.

(10) Prepares the battalion preaccident plan in coordination with other unit members and outside agencies.

f. CBR Officer. The battalion commander will appoint an officer to act as the CBR officer for the battalion. This officer will be school trained as prescribed in appropriate training directives (AR 220–58). The CBR officer, assisted by the chemical NCO, is the advisor to the battalion on CBR operations. The CBR officer, to include the NCO as appropriate—

(1) Assists the battalion S2 in the collection, processing, and dissemination of CBR intelligence information to include radiological survey party duties (FM 3–12); use of effective wind messages, fallout prediction messages, and nuclear, biological, and chemical reports as appropriate; enemy CBR materiel; and CBR contamination data.

(2) Assists the battalion S3 on chemical, biological, and nuclear defense plans and operations to include preparation of the CBR and nuclear defense annexes to the battalion SOP, the training of unit CBR teams, determination of radiological time or entry and time of stay calculations, computation of the battalion radiation dose, preparation of the CBR portion of the master training schedule, the inspection of all CBR training, and the selection of individuals for CBR school training.

g. Liaison Officer. The liaison officer is the commander's personal representative to the unit with which liaison is established. He must be thoroughly familiar with the situation and plans of his own unit and with the policies of his commander, and make such information available to the commander and staff of the visited unit. He familiarizes himself with the situation and plans of the unit to which he is sent and secures and transmits desired information to his own unit.

Section III. COMMAND AND CONTROL FACILITIES

4–15. Command Post

a. The direction and control of battalion operations is exercised primarily through the battalion CP. The CP maintains communications with higher, adjacent, supporting, supported, and lower units (including indigenous forces as appropriate). Personnel normally at the CP include the battalion commander, battalion staff, necessary special staff officers, liaison personnel, and supporting personnel. Operation and displacement of the CP are prescribed in the unit SOP.

b. The activity of the CP is centered on the S2/S3 staff. The executive officer normally supervises CP operations and insures that sufficient officer and enlisted assistants who are familiar with the situation and the operations-intelligence center are on duty at all times. Frequently, the commander and the S3 will be away from the CP to maintain a more personal

contact with subordinate aviation units or higher headquarters. Other staff officers may also be away to properly supervise their areas of interest. At such times, personnel of the CP will continue to maintain a complete status of operations and will inform the commander and staff of information received and transmitted.

c. Although the CP is the central control point for the battalion, not all plans and decisions are made there. The commander assures that sufficient communications means are available to permit operation on the move. The command group (para 4–16) maintains communications and control while the main part of the CP moves.

d. The battalion commander orders the CP displaced whenever necessary to insure security or continuous responsive aviation support to the user.

4–16. Command Group

a. A command group is a subdivision of the forward echelon containing certain key staff officers and personnel who usually accompany the commander. This group enables the commander to operate away from his CP in order to maintain a personal knowledge of the situation, exercise personal leadership, and closely control the operation. The command group has no fixed organization, but consists of the commander and selected personnel and equipment for a given situation. It may include the S3, signal officer, maintenance officer, liaison officer, and communications personnel and necessary ground vehicles, aircraft, and command radio facilities. Sufficient command radio facilities are required to enable the command group to contact the CP, supported units, and subordinate units of the battalion as necessary.

b. There is no prescribed requirement for using the command group. This depends upon the commander's personality and the operational requirement. The means of transportation varies with the situation. If aircraft are available (particularly during large scale airmobile operations), the commander may operate from an aerial CP. He may divide the command and control facilities between operation on the ground and in the air.

4–17. Alternate Command Posts

Battalions prepare plans and train personnel to continue command and control in the event the battalion CP is rendered inoperative. Normally, a CP of one of the companies will be used as an alternate battalion CP, or the facilities of the command group may be used temporarily. Such plans are included in the SOP.

4–18. Headquarters Management

The S1 designates the specific areas to be occupied by the commander and by each staff section and activity. He is assisted by the headquarters company commander and the signal officer. Factors to be considered in the headquarters organization and operation include the following:

a. To reduce internal traffic, the message center should be located near the entrance to the CP.

b. The motor pool and its entrances and exits should be in a well camouflaged and readily accessible location. A dismount point is established near the vehicular entrance to the CP.

c. Radio sets should be located to give the best transmission and reception. Remote control equipment may be used to allow the CP to be located on lower ground than that on which communications antennas are installed.

d. The switchboard should be located in an area near incoming wire circuits and away from noise and interference.

e. Incoming messages normally are taken to the message center to be signed for, and are then delivered to the unit distribution center (a function of the S1) where they are routed to the appropriate staff sections. Staff sections act on messages and, when necessary, inform the commander of their contents without delay.

f. Outgoing messages to be transmitted via signal communications means are sent to the message center in duplicate.

g. The S1 section is the office of permanent record for the unit. All incoming or outgoing messages or correspondence are recorded and filed there, if required.

Section IV. COMMAND AND STAFF ACTIONS

4-19. General

In some instances, particularly fast-moving airmobile operations, the sequence of command and staff actions as discussed in paragraph 4-20 may be expedited. Trained and experienced commander and staff officers continually keep abreast of the situation and constantly make or revise estimates. Decisions are often based on rapid estimates and, for the most part, orders are oral and fragmentary. Warning orders are issued to subordinate commanders as early as possible to permit initial preparation. Subordinate commanders are not necessarily called to the CP to receive orders. They may be issued orders at any place or over the radio by the commander or designated staff officer in the name of the commander. Command and staff action sequence will vary according to the time available, the situation, the personality of the commander, and professional abilities of the commander and his staff.

4-20. Command and Staff Action Sequence

a. Upon receipt of a mission from higher headquarters (or the senior advisor to indigenous forces), the commander analyzes the mission to determine the specified and implied tasks which must be performed in order to accomplish the mission. The commander establishes liaison with the supported unit either immediately, using previously prepared plans, or after he has met with his staff and formulated tentative plans. Then, based on estimates and recommendations of the staff, his knowledge of the situation, guidance provided by the higher commander, and his professional judgment, he formulates and issues planning guidance. This *planning guidance* provides the necessary direction for concurrent planning by the staff and a framework for making studies and estimates. Planning guidance from the commander is essential to eliminate needless exploratory work by the staff.

b. Upon receipt of the commander's planning guidance, staff officers begin their individual staff estimates. Formulation of operation estimates requires certain detailed information from all staff officers. The S2 furnishes the S3 the results of his analysis of the weather, terrain, enemy situation, and enemy capabilities. The S1 and S4 furnish the S3 details pertaining to their respective fields.

c. As staff officers prepare their estimates, the commander supplements liaison by visiting with and advising the supported unit on aviation matters. Based on information obtained from the supported commander, the aviation battalion commander may change or modify his initial planning guidance. Each of the staff officers must then revise his initial planning estimates accordingly.

d. A meeting is then held during which the S3 presents possible courses of action to other staff officers. Each staff officer completes his estimate using these courses of action to determine what limitations exist and which course is favored from his respective viewpoint.

e. Each staff officer arrives at recommendations to be made to the commander. Again a meeting is conducted during which the S3 presents one or more courses of action and recommends priority. Each of the other staff officers comments in turn on significant aspects within his respective field and recommends the best course of action from his standpoint. The commander may question his staff to ascertain any additional information he requires to complete his estimate.

f. The commander completes his estimate and announces his *decision.* This decision is based on the supported unit commander's decision and recommendations from the staff. The decision is a concise statement of the general course of action which the unit will adopt to accomplish the mission. The statement should contain as much of the elements of who, what, when, where, how, and why as appropriate. The commander should elaborate upon the decision by issuing his *concept of the operation.* The concept is presented to the staff at the time of the announcement of his decision. This concept is the basis for the concept of operation, which is paragraph 3a of the operation order.

It presents the commander's visualization of the operation and may include—

(1) Objective of operation.
(2) Task organizations.
(3) Escort plans.
(4) Formations.
(5) Maintenance support plans.
(6) POL support.
(7) General control measures to include loading area control, airspace control, and landing zone control.

g. Based on the decision and the concept, the staff *completes its planning.* The S3 has primary staff responsibility for the preparation of the plan. Additional details for the operation are furnished the S3 by other staff officers. The plan is then presented to the commander for his approval. After approval, the S3 prepares the plan (order) to implement the commander's decision.

h. After the order is issued, the commander, assisted by his staff, *supervises its execution.*

i. The executive officer coordinates the accomplishment of the above actions to insure that the proper coordination takes place between staff officers and the liaison officer, and that the commander's desires are followed. The executive officer is prepared to assume command if necessary.

4–21. Considerations in Developing Courses of Action

The aviation battalion commander and staff must consider the following in arriving at a course of action considered in the estimate.

a. Mission. The mission is always given first consideration in developing courses of action. The assigned mission, as well as missions of supported units, dictates employment of the battalion which in turn must be translated into tasks for subordinate and supporting units. Planning is oriented towards accomplishment of the mission. The aviation battalion plan must be integrated into and based upon the fire support plan and scheme of maneuver of supported units. Also, future missions must be considered and priorities established for their implementation.

b. Enemy. The location, disposition, and capability of the enemy (especially his air defense) must be considered.

c. Weather. The effects of weather on visibility, soil, trafficability, and men and equipment are important considerations in developing the best course of action for any operation. Low ceilings and limited visibility reduce enemy air and ground action and may be advantageous during some combat operations. These weather conditions can hinder air operations by precluding the use of large formations of aircraft.

d. Terrain. Terrain must be considered for local security and for locating support facilities such as airfields, heliports, loading zones, landing areas, navigation aids, flight routes, routes for ground supply, and communications.

e. Availability of Personnel, Aircraft, and Equipment. This refers to all the personnel, aircraft, and equipment available to the battalion. The disposition of the battalion and supporting units and time and space factors must be considered. Availability of maintenance support and navigational facilities is of primary importance. Class I, IIIA, and VA supplies require special considerations because of the large area of operations of an aviation battalion.

f. Airspace Utilization. Consideration must be given to use of available airspace as established within the broad guidance, including air regulations of the host country if applicable, for use of airspace within the theater of operations. At times the battalion may have to recommend changes to air defense rules of engagement, reentry procedures, concept of air support from other services, and the airspace utilization plan to accomplish a particular mission.

g. Communications. One of the most essential elements to be considered in arriving at a course of action is communications for command control and logistical support.

CHAPTER 5

RECONNAISSANCE, SELECTION, AND OCCUPATION OF POSITION (RSOP)

5–1. General

Reconnaissance of prospective base and satellite airfield locations is a continuing process. The preselection of a number of sites for possible future use will aid in selecting the most suitable position when the situation requires that the unit be displaced. The decision to displace is usually made on the initiative of the battalion commander in order to enable the unit to best respond to requirements of supported units. Divisional units must have prior approval of the division commander for both the intended location and time of displacement. FM 1–5 contains details on the warning order and the reconnaissance, advance, and quartering parties.

5–2. Steps in the RSOP

a. Reconnaissance. Factors to be considered when making reconnaissance of possible future locations include the following:

(1) Geographical location favoring the mission.

(2) Terrain should be adaptable to requirements of the type aircraft being used with a minimum of engineer effort.

(3) Terrain features should allow for the positioning of units on satellite airfields as required.

(4) Terrain should be adaptable to requirements of maintenance and communications facilities, ground resupply, and other functions.

(5) Terrain features should provide for maximum concealment of installations and activities.

(6) The battalion should be located near security forces commensurate with dispersion requirements of the situation.

(7) Terrain should provide natural defensive features around the perimeter of the base airfield.

(8) Terrain should be checked for chemical and radiological contamination.

b. Selection. Final selection of the area to which the battalion is to displace, usually from areas tentatively selected in advance, is made as soon as possible after the need for displacement is established. The same considerations which are used for a reconnaissance (*a* above) are used in selecting the most suitable location for the base and satellite installations. Ground reconnaissance of the tentatively selected location follows map and aerial reconnaissance. The battalion quartering party moves to the new location and prepares to guide elements of the battalion into position. The quartering party consists of at least one representative of each of the battalion staff sections, one representative of each collocated company, necessary communications and maintenance personnel, and other personnel to include pathfinders required by the situation. Battalion and company position areas are described below:

(1) *Battalion position area.* The battalion position area encompasses the battalion headquarters, the main operating base, and airfields/heliports as required.

(2) *Company position area.* A company position area includes the location of the company headquarters, flight operations, and the airfield/heliport

from which the company's aircraft operate.

c. Occupation of Position. Occupation of position may be either hasty or deliberate, and may be executed during day or night. Following is a discussion of the types of occupation which may be performed by an aviation battalion.

(1) *Daytime hasty.* When hasty occupation of an airfield or heliport during daytime is necessary, reconnaissance of the intended area is made by the reconnaissance party from the air while the main body is en route. Normally, the airfield is selected and a landing made by the reconnaissance party's aircraft. When use of the field has been determined feasible, the en route unit is advised. The reconnaissance party organizes the area and points out locations for arriving elements. The aviator of the reconnaissance aircraft may be required to position arriving units or act as the controller to land other aircraft.

(2) *Daytime deliberate.* When sufficient time is available for preplanning and the careful selection of a new area, a deliberate move is made. The battalion commander's party moves to the new location to supervise preparations for positioning arriving units. The battalion is usually divided into two echelons for the displacement. Upon receipt of the commander's order, the first echelon moves to the new location. The second echelon remains operational during that period. After the first echelon completes displacement and becomes operational, the commander orders the second echelon to displace to the new location.

(3) *Night hasty.* Night hasty occupation is not attempted except under conditions of extreme urgency. Under such conditions, the procedure discussed in (4) below is adapted to the situation.

(4) *Night deliberate.* Deliberate occupation of an airfield or heliport at night requires the presence of more personnel in the area prior to the arrival of the main body than during the day. One representative from each section is required to lead that section to its assigned area and also to guide arriving vehicles to parking areas. Vehicles should not move at night without a guide. To prevent delay at the entrance to the airfield or heliport, guides must be familiar with the area and must meet vehicles upon arrival. Aircraft should not be landed until the area is secure and terminal facilities are available. The airfield or heliport lights should be in place, communications established, and the facilities checked for usability prior to darkness. Wire communications should be operational and, if possible, the operations tent or vehicle should be in position prior to arrival of aircraft. Landings and ground movement of aircraft must be controlled by a controller familiar with the terrain and airfield organization. Pathfinder support normally will be utilized.

5–3. Displacement of Headquarters

During the displacement, the battalion commander or his representative accompanies the advance party to the new location in advance of the first echelon to supervise preparations for positioning arriving units. The executive officer (or the commander) remains with the second echelon to conduct headquarters functions while the first echelon displaces to the new location. After the first echelon has completed the displacement and become operational and the battalion commander's party has established headquarters at the new location, the second echelon and the remaining headquarters element displace to the new location.

5–4. Aviation Battalion Marches

a. Motor march techniques to include proper intervals between vehicles, safe speeds, and security are discussed in detail in FM 55–35. Rehearsals are excellent means of resolving

problems which will be encountered in actual moves. FM 19–25 contains guidance on essential motor vehicle traffic control techniques and procedures. Appendix F discusses Redeye employment during motor marches.

b. To insure continuous operations, movement of aircraft normally is phased by echelons, divided into flights if necessary, with sufficient time intervals between flights to allow positioning in the new area without creating a large concentration of aircraft. The trail aircraft of each flight should carry tools, parts, and maintenance personnel for emergency repairs en route.

c. The battalion should develop standing operating procedures covering motor and air moves to include loading plans and security precautions. FM 100–5 contains doctrine governing troop movements.

CHAPTER 6

ORGANIZATION OF POSITION

Section I. COMMAND POST

6–1. General

The aviation battalion command post is the headquarters from which the commander and his staff exercise administrative and tactical functions. Personnel of the CP normally include—

a. The battalion commander (who also serves as the division aviation officer in the divisional aviation battalion).

b. The executive officer.

c. The S1, S2, S3, and S4 or their representatives.

d. The signal officer and/or other required special staff personnel.

e. The battalion sergeant major.

f. Sufficient clerical, communications, and other personnel to assist the commander and staff in maintaining a 24-hour capability for the CP.

6–2. Location

a. The CP is located in the position best suited to accomplishing the mission and from which control over the elements of the battalion can best be exercised normally on or near the division airfield. Since reliable communications must be maintained, suitability of terrain to the operation of communications equipment is one of the first considerations in determining the specific location of the command post. For this reason, the signal officer, normally in conjunction with the S1, studies the terrain and makes recommendations for the exact location and interior arrangement of the CP.

b. The CP should be located so as to permit maximum dispersion of personnel or equipment consistent with efficient operations. It should not be near prominent terrain features such as crossroads and bridges which could provide references for enemy observation and fire. Other matters to be considered include security, cover and concealment, accessibility, and soil condition and drainage.

c. The S3 makes recommendations for the general location of the CP to the battalion commander. The S1, after consultation with the headquarters company commander and the signal officer, recommends selection of the specific site.

6–3. Internal Arrangement

The policy of the battalion commander, in accordance with the situation, influences the internal arrangement of the CP. The S1 has staff responsibility for positioning elements and personnel normally in accordance with the battalion SOP. In general, personnel on duty in the CP at any given time are limited to those essential to its efficient operation. The minimization of foot and vehicular traffic within the CP is a basic consideration. Traffic can be reduced by locating key personnel and facilities in close proximity to others having the same areas of interest. It may be possible for the commander and principal staff officers to be located within voice distance of each other. The S1 and S4 may be collocated and the S2 may be collocated with the S3. A dismount point, established adjacent to the immediate area, will preclude unnecessary vehicular traffic in the CP. Location of the message center just inside the entrance to the CP will simplify the flow of outgoing and incoming messages. The location of the communications element near

the message center will facilitate the flow of messages between those two elements.

6-4. Security of the Command Post

The aviation battalion is basically responsible for the security of its own CP. The battalion executive officer has staff responsibility for this security. The headquarters company commander formulates and implements the local CP security plan. Where security is a problem beyond the capability of the battalion, the S3 recommends to the battalion commander that an appropriate security element be requested from higher headquarters. Avoidance of detection through use of camouflage, concealment, and dispersion reduces problems of security. Use of remote control equipment makes possible the positioning of the CP in a wooded area or lower ground, with the radio antennas installed on adjacent hilltops. Cover and concealment are gained by constructing cover and taking advantage of natural terrain features by locating the CP in a wooded or otherwise protected and concealed area. It may be necessary to dig in or revet critical installations. Natural concealment should be preserved by avoiding the creation of roadways leading to the CP as well as other terrain alterations which will be visible to enemy observers. If a helicopter landing area is needed, it should be located adjacent to the CP, preferably in a natural clearing near trees under which helicopters can be concealed from aerial observation. Panels or lights identifying the landing area may be displayed during prearranged periods only; they should be concealed at other times. Deceptive approaches and departures should be used by aircraft crews operating to and from the vicinity for the purpose of landing or airdropping messages or equipment. Motor and foot traffic near the CP should be kept to a minimum and should be concealed to avoid attracting the interest of enemy observers. Appendixes E and F discuss defense against enemy air attack or observation.

Section II. HEADQUARTERS COMPANY

6-5. General

The headquarters company of the aviation battalion is organized to provide the necessary personnel and equipment to meet the internal administrative and operational requirements of the battalion headquarters. The headquarters company commander supervises all activities of his unit.

6-6. Elements

Elements of the headquarters company include the—

a. Company Headquarters. This unit provides administrative services for the battalion headquarters and headquarters company. These services pertain to individual requirements of assigned personnel to include mess, supply, quarters, supervision of nonduty hours activities, and the maintenance of some administrative records.

b. Battalion Headquarters Section. The battalion headquarters section provides the battalion commander and staff with enlisted personnel for the battalion staff sections.

c. Battalion Communications Section. Personnel of the battalion communications section supervise and participate in the establishment and operation of the communications system of the aviation battalion and provide organizational maintenance for the battalion's ground communications equipment. They are also responsible for operating the battalion airfield terminal control facility, including air-ground communications and GCA equipment. In the airborne division, the airfield terminal control section performs this function (chap 9).

d. Battalion Maintenance Section. The battalion maintenance section performs organizational maintenance on wheeled vehicles organic to the headquarters and headquarters company and backup organizational maintenance for subordinate units. It also provides supervision for, and performs inspection of, all battalion maintenance activities except the maintenance of signal equipment, and performs radiological

and chemical decontamination of organizational equipment as required.

e. Battalion Medical Section. The battalion medical section provides unit level medical service to include establishment of an aid station and medical care and evacuation of assigned and attached personnel of the battalion (chap 9).

f. Pathfinder Section. The pathfinder section reconnoiters and marks drop or landing sites to insure accurate delivery of personnel and materiel by airdrop or landing operations, and assists in navigation and control of Army aircraft in the objective area. The section is similar to the pathfinder platoon, airmobile division, discussed in chapter 15.

CHAPTER 7

COMBAT SERVICE SUPPORT

Section I. GENERAL

7–1. General

Combat service support is the assistance provided to operating forces primarily in the fields of administrative services, chaplain service, civil affairs, finance, legal service, maintenance, medical service, military police, replacements, supply, transportation, and other logistical services including military civic action.

7–2. Responsibilities

The S4 is the staff officer responsible for logistics within the aviation battalion. The S1 is responsible for personnel actions and the maintenance of administrative records and reports. Civil affairs activities of the aviation battalion are limited to those affecting accomplishment of the mission and those support tasks which may be properly assigned. When the mission allows, personnel may participate in military civic action projects as part of the overall civil affairs program (FM 41–10).

Section II. LOGISTICS GENERAL

7–3. Major Areas of Responsibility

The S4 is responsible for the supply, maintenance, evacuation, and transportation services of the battalion. He keeps the battalion commander informed concerning supply matters within the battalion. The battalion headquarters section implements action to secure supplies, transportation, and food service support. Medical service is provided by the battalion medical section. Wheeled vehicle maintenance is performed by the battalion maintenance section. Miscellaneous related activities at the battalion level consist primarily of logistical planning and preparation of orders to implement the plan for combat service support of the tactical operation.

7–4. Mess

Unit feeding plans are prepared by unit commanders to conform to missions, locations, and other conditions. In the infantry division, the aviation general support company provides mess facilities for the headquarters and headquarters company. In the airborne division aviation battalion, mess facilities for the general support company are provided by the headquarters company. The S4 provides for the feeding of detached units by transporting food to such units, supplying them with facilities and personnel for preparing their own food, or by other means. Arrangements can sometimes be simplified by arranging for a detached unit to mess with a collocated unit of another organization.

Section III. SUPPLY

7–5. Normal Supply

a. General. The field army support command (FASCOM) is responsible for providing all classes of supply to the field army. The division support command provides division level logistical support to include storage and distri-

bution of class I, II, III, and IV supplies and control of class V supply. (In the airborne division, the support command provides storage and distribution of limited amounts of class V supplies. In the airmobile division, the support command also stores and issues class V supplies.) If class V supplies cannot be delivered to the using unit, they must be picked up by the using unit directly from field army ammunition supply points (ASP) established and operated by elements of the FASCOM ammunition brigade.

b. Divisional Aviation Battalion. AR 711–16, AR 725–50, and AR 735–35 contain procedures for requesting and requisitioning supplies. Following is a list of the classes of supply, including water, and a brief discussion of the requisitioning procedures for a divisional aviation battalion.

(1) *Class I.* The divisional aviation battalion is furnished class I supplies by the supply or supply and transport battalion, as appropriate. Ration issues normally are based on unit strengths, the desires of the commanders, and the tactical operations. To the extent feasible, rations are delivered on a scheduled supply basis without requisition by the unit. Quantities are based on unit strengths as reported by the administration company.

(2) *Class II.* Class II supplies, with the exception of aircraft repair parts and medical, cryptographic, and electrical accounting supplies (to include punch cards), are provided by the supply and transport battalion. Replacement aircraft and aircraft supplies and repair parts are furnished by the aircraft maintenance and supply battalion or by the aircraft maintenance company of the division maintenance battalion, depending on the type division involved.

(3) *Class III.* Class III items are drawn from and may be delivered to the user by tankers of the supply and transport battalion, or by means of aircraft in airborne and airmobile operations.

(4) *Class IV.* Class IV items are requisitioned through command channels. The supply and transport battalion or another supplying organization delivers this class of supply to the user or to the forward class I distributing point where the items are issued to the requesting unit.

(5) *Class V.* In the infantry, armored, mechanized, and airborne divisions, ammunition requisitions (transportation orders), usually to replace expenditures from the basic load, must be approved by the division ammunition officer (DAO) who normally is located at the command post of the support command. The DAO may station a representative at the class V distribution point to facilitate authentication of requisitions for ammunition. The aviation battalion sends its organic vehicle to the DAO authentication point, then on to the class V supply point to pick up the needed ammunition. In the airmobile division, unit distribution is the primary method of providing class V supplies to units and resupply of ammunition, like other supplies, is made by the support command on a scheduled basis.

(6) *Water.* The division engineer battalion establishes water points at convenient locations near the class I supply point. The aviation battalion sends its water-carrying vehicle to the nearest distribution point to obtain the battalion's water supply.

7–6. Aviation Supply

Supplies peculiar to aviation are identified by the suffix A. The classes of aviation supply are as follows:

a. Class IIA and IVA. As with other end items, the division supply and transportation battalion is responsible for normal end item supply of aircraft items. Aviation repair parts,

including avionics and aerial armament repair parts, are provided on an as-needed basis by the transportation aircraft maintenance company of the division maintenance battalions.

b. Class IIIA. Where unit distribution is not effective, the using unit sends its organic refueling equipment to the class IIIA supply point to pick up aviation POL supplies. If organic equipment is inadequate, local arrangements are made for other vehicles to assist in the POL supply.

c. Class VA. Each company of a divisional aviation battalion uses its organic vehicles to transport aviation ammunition from the nearest ammunition supply point. Units whose ammunition expenditures may exceed their transportation capabilities may request additional transport vehicles from their higher headquarters.

Section IV. MAINTENANCE

7–7. General

Maintenance includes all actions taken to keep equipment in a serviceable condition or to restore it to serviceability. The battalion commander performs maintenance inspections to ascertain the serviceability of equipment and promote efficient maintenance. The battalion maintenance section keeps the commander informed regarding the status of organizational maintenance activities in the battalion.

a. Categories of Maintenance. The categories of maintenance are as follows (AR 750–1) :

(1) *Organizational maintenance.* Organizational maintenance is that maintenance normally authorized for, performed by, and the responsibility of a using organization on equipment in its possession.

(2) *Direct support maintenance.* Direct support maintenance is that maintenance normally authorized for and performed by the designated maintenance activities in direct support of using organizations. It consists of the repair of end items or unserviceable assemblies in support of using organizations on a return to user basis.

(3) *General support maintenance.* General support maintenance is that maintenance authorized for and performed by designated TOE and TD organizations in support of the Army supply system.

(4) *Depot maintenance.* Depot maintenance activities, through overhaul of economically repairable materiel, augment the procurement program in satisfying overall Army requirements and, when required, provide for repair of materiel beyond the capability of general support maintenance organizations.

b. Maintenance Responsibilities.

(1) *Commander.* A commander is responsible for—

(*a*) Insuring that all equipment issued to his unit is in a serviceable and combat-ready condition and is properly used, maintained, and serviced.

(*b*) Advising higher commanders of equipment replacement and maintenance support requirements.

(*c*) Complying with preventive maintenance instructions and procedures, to include training his command accordingly.

(*d*) Assigning maintenance responsibilities for organizational equipment to specific individuals.

(*e*) Advising the commander of the supporting aircraft direct support company concerning projected maintenance support requirements, coordinating with the support commander in developing a mutually acceptable aircraft maintenance support plan, and assuring delivery of

equipment to the maintenance activity in accordance with the agreed upon maintenance schedule.

(2) *Individuals.* Individuals are responsible for equipment issued for their own use. Operators or users of equipment are responsible for proper preventive maintenance of assigned equipment.

c. Maintenance Inspections. Inspections are the means by which commanders ascertain the serviceability of equipment and promote efficient maintenance. The commander insures that action is taken to correct deficiencies noted during inspections. The maintenance battalion of the division support command inspects the organizational maintenance of aircraft and motor vehicles (FM 54-2).

d. Maintenance Records. Maintenance records are kept in accordance with the Army integrated equipment records and maintenance management system (TM 38-750 and TM 38-750-1).

7-8. Aircraft Maintenance

The aviation battalion maintenance officer keeps the battalion commander informed as to the status of battalion aircraft. The maintenance officer collects this information through status reports, through inspection of aircraft, and by following closely the progress on aircraft undergoing maintenance. Aircraft maintenance at the direct support level, to include supply, recovery, and repair, is performed by the transportation aircraft maintenance company of the infantry/airborne division support command's maintenance battalion or the aircraft maintenance and supply battalion of the airmobile division support command. The aircraft maintenance company and the battalion also provide direct support avionic and armament maintenance for items installed in aircraft of the aviation battalion.

7-9. Vehicle Maintenance

a. The battalion maintenance officer and motor vehicle personnel assigned to the maintenance section assist the battalion commander by keeping him informed regarding the status of motor vehicles in the battalion. This information is collected by the maintenance section through vehicle status reports from the various units, inspection of maintenance records, inspection of equipment, and investigations to determine progress being made on vehicles undergoing maintenance. The maintenance section also procures parts and services necessary to the organizational maintenance of the battalion's motor vehicles.

b. The battalion maintenance section performs vehicle maintenance at the organizational maintenance level which is beyond the capabilities of drivers and crews whose maintenance duties generally are confined to the operation, cleaning, and lubrication of vehicles. This section assists the company maintenance personnel in performing organizational maintenance as necessary. Vehicle maintenance beyond the organizational level normally is provided to the divisional battalion by the headquarters and main support company of the division support command maintenance battalion (FM 9-30 and FM 29-22).

7-10. Communications and Electronic Maintenance

The aviation battalion signal officer keeps the battalion commander informed as to the status of all communications electronics equipment in the aviation battalion. The signal officer collects this information through status reports and by inspection. Only organizational communications electronics maintenance is accomplished within the aviation battalion. Direct support level avionics maintenance is provided by the division's aircraft maintenance unit. Limited direct support maintenance of cryptographic equipment is performed by the signal battalion. Other direct support signal maintenance is provided by the division's maintenance battalion.

7-11. Other Maintenance

Organizational maintenance of organic medical, communications, and nonvehicular materiel, and similar equipment is performed by personnel of the unit using the equipment. Direct

support maintenance of medical equipment may be performed by the division medical battalion or by the nearest medical unit having a direct support capability.

Section V. OTHER LOGISTICAL MATTERS

7–12. Captured Materiel

The aviation battalion will seldom be concerned with the disposition of captured enemy materiel. However, the commander must provide for the prompt disposition of any such materiel acquired by the battalion. Items of new or unusual design are selected for routing through intelligence channels. Other captured materiel is disposed of in the same manner as salvage. The use of captured materiel which may lead to misidentification of the user by friendly forces is restricted to emergency conditions and is undertaken only after adjacent friendly forces have been alerted to plans for its use.

7–13. Destruction of Supplies and Equipment

a. The laws of land warfare forbid intentional destruction of medical supplies and equipment (FM 27–10).

b. Upon authority from higher headquarters, normally according to a previously prepared plan, nonmedical supplies and equipment may be destroyed to deny their use to the enemy.

c. Nonmedical supplies and equipment which can be put to use to relieve suffering by civilians will not be destroyed but will be turned over to the appropriate civil affairs unit for disposition in accordance with the theater policy relative to civilian supply.

7–14. CBR Effects on Combat Service Support

Following a nuclear attack, battalion units are reequipped and resupplied as quickly and completely as the situation permits. It may be possible to redistribute supplies and equipment within the battalion to relieve severe shortages in units most seriously affected by the attack. Initial decontamination efforts are confined to those areas containing critically needed supplies and equipment. Commanders must arrange to operate with available supplies and equipment until resupply can be accomplished. Combat service support functions will be concentrated on alleviating shortages in priority areas during the resupply period.

7–15. Decontamination

The aviation battalion will be concerned primarily with the decontamination of personnel, equipment, supplies, aircraft, and ground vehicles. Washing and weathering are two of the simplest means of decontamination. FM 21–40, FM 21–41, and TM 3–220 contain details on the decontamination of personnel and equipment.

Section VI. MEDICAL SUPPORT

7–16. Organization of the Medical Section

The battalion surgeon supervises the operation of the medical section (aid station) in the divisional aviation battalion. Enlisted medical personnel assist the surgeon in providing medical care and treatment within the capability of the section.

7–17. Operation of the Medical Section

Aid men furnish emergency medical treatment to patients in the field. If further treatment is required, patients are evacuated to the battalion aid station where emergency treatment is continued. Patients who can be treated within the capabilities of the aid station are given necessary emergency care and returned to duty. Patients whose injuries or illnesses necessitate further treatment are evacuated to the nearest clearing station or other appropriate medical treatment facility. Patients are

evacuated by air and ground ambulances of the supporting medical unit. If the requirement for evacuation of patients exceeds the capability of the supporting ambulance unit, nonmedical air or surface transportation may be employed under control of the surgeon.

7–18. Medical Supply

Medical supplies and equipment for the aviation battalion are requisitioned by the battalion surgeon from the division medical battalion, or nearest medical unit with support capability. These requests may be carried by ambulances evacuating patients.

Section VII. PERSONNEL ACTIONS AND ADMINISTRATIVE RECORDS AND REPORTS

7–19. Personnel Actions

The battalion S1 conducts or supervises most personnel actions in the battalion. His activities are coordinated with other battalion staff officers regarding their areas of interest and in accordance with the SOP. Personnel functions for which the S1 is responsible, wholly or in coordination with other battalion staff officers, include—

a. Personnel records and reports.

b. Replacements.

c. Prisoners of war.

d. Recovery and disposition, including search, recovery, identification, and evacuation of U.S., Allied, or enemy dead.

e. Maintenance of discipline, law and order.

f. Morale and personnel services, including pass and leave policy, awards and decorations, mail, finance service, special services, and promotions and battlefield appointments.

7–20. Unit Records and Reports

The S1 is responsible for maintaining unit records and for preparing reports required of the battalion. The unit SOP should indicate the battalion commander's requirements regarding the preparation and maintenance of such records and reports. Written reports which may be required include initial strength report, field morning report, airhead strength report, personnel report, personnel daily summary, personnel situation report, and casualty feeder reports. Notes and memorandums may be maintained to facilitate preparation of necessary reports. Company reports can often be minimized by use of the telephone.

7–21. Unit Journal

The unit journal is a logbook of chronological record of events kept by a unit or staff section. The S3 maintains the journal for the battalion. The commander may require that each staff section, or any combination of staff sections, maintains a journal covering the activities in their respective areas of responsibility (FM 101–5). The classification of the journal will be stamped at the top and bottom of each page.

7–22. Workbook

Each battalion staff section maintains a workbook in which is recorded information regarding the section for possible future use in preparing reports, estimates, plans, and orders. The format of the workbook will be varied to fit the needs of the user. The classification will be stamped at the top and bottom of each page.

CHAPTER 8

PLANS AND OPERATIONS

Section I. MISSION ASSIGNMENT

8-1. General

The opportunity to employ Army aviation to the best advantage may come suddenly and require immediate action on the part of the aviation battalion or its subordinate elements. For this reason, the battalion must maintain a constant state of readiness, consistent with its routine missions. Prior planning and coordination of aviation support will promote efficient and rapid reaction to operational requirements. Close coordination between the supporting and supported commanders is of primary importance for accomplishment of the mission. When the mission assigned to a company is different from the mission of the battalion, the company may be placed under operational control of the headquarters that directed and is supporting the operation. Under certain circumstances, an aviation battalion commander may attach one company to another or place one company under operational control of another for a specific mission or period of time.

8-2. Tactical Missions and Command Relationships

a. Support requirements to be implemented by an aviation battalion are indicated by the assignment of tactical missions. These tactical missions are assigned by the commander of the force being supported by the battalion.

b. A subordinate aviation commander has the authority, inherent in his command responsibility, to issue orders to elements under his command as necessary for the accomplishment of his assigned mission. This includes organizing his unit for combat and dividing assigned tactical missions into appropriate tasks, if such action does not degrade his overall capability of accomplishing his assigned mission and does not reduce the degree of centralized control retained by the commander of the unit being supported.

c. Aviation units may be assigned one of three standard tactical missions: general support, direct support, or reinforcing. A direct support assignment provides the supported commander greater freedom of utilization than a general support or reinforcing assignment (table 1).

(1) *General support.* An aviation unit assigned the mission of general support furnishes aviation support to the forces as a whole. Control is retained by the parent unit or a higher headquarters which also establishes priorities for support. The supporting unit commander prepares his own plans and orders and retains the responsibility for all that his unit does or fails to do.

(2) *Direct support (DS).* An aviation unit assigned the mission of DS provides aviation support for a specified command, to include the staff function of advising and assisting the supported commander in all aviation matters. The DS aviation unit commander positions his unit and coordinates its activities with those of the supported command as necessary to properly accomplish the support mission. However, the aviation unit remains under the command of the commander who assigned the DS mission. The supporting unit commander prepares his own plans and orders and retains the

Table 1. Missions and Command Relationships for Aviation Units.

Army aviation unit assigned tactical mission or command relationship of—	Receives tasks from and responds directly to—	Establishes communications and liaison with—	Moves base by order of—	Combat service support furnished through—	Highest degree of control that can be passed to subordinates—
Attachment	HQ to which attached.	HQ to which attached	HQ to which attached.	HQ to which attached unless otherwise specified.	All missions and relationships listed in this table.
Operational control.	HQ exercising operational control.	As directed by HQ exercising operational control.	HQ exercising operational control.	Habitual service support channels or as otherwise specified.	Operational control, DS, GS, reinforcing.
Direct support	HQ being supported.	HQ being supported	Parent unit or at the discretion of the supporting unit commander.	Habitual service support channels or as otherwise specified.	DS
General support.	HQ being supported.	As directed by the HQ being supported.	Parent unit or a higher HQ	Habitual service support channels or as otherwise specified.	GS
Reinforcing	HQ being reinforced.	Reinforced HQ	Parent unit or at the discretion of the reinforcing unit commander.	Habitual service support channels or as otherwise specified.	Reinforcing.

responsibility for all his unit does or fails to do. This supporting role provides a direct mission request channel between the units with the supported unit commander specifying the requirements while the supporting unit commander determines how the requirements are to be provided.

(3) *Reinforcing.* An aviation unit assigned the mission of reinforcing augments the aviation support capabilities of another aviation unit. The reinforcing unit remains under the command of its parent organization, but its flight missions are planned and controlled by the reinforced unit. A direct communications channel is established between the reinforcing and the reinforced units, and the reinforced unit calls directly upon the reinforcing unit for assistance. The authority and responsibility of commanders are the same as those prescribed for direct support.

d. Freedom of utilization permits the commander to employ organic, attached, or supporting Army aviation units in the way which contributes most to the successful accomplishment of his mission. Organic assignment provides the commander with greater freedom of utilization than attachment, and attachment provides greater freedom of utilization than operational control.

(1) *Organic assignment.* An organic assignment is authorized by TOE or by modification TOE (MTOE) and is relatively permanent in nature.

(2) *Attachment.* Attachment is the assignment of a status, not a tactical mission; a tactical mission is assigned by the command to which attachment is made. An aviation unit may be attached to a maneuver element or to another aviation unit. In addition to complete control, the gaining commander is responsible for providing the logistical and administrative functions for the attached unit. Because of the increased burden imposed by these functions, attachment of aviation units will be made only when the situation dictates, such as duration or distance involved in support of the operation. Should a supported unit be unable to provide the required support, the attachment order may limit the amount of service support provided.

(3) *Operational control.* Aviation units may be placed under the operational control of the supported unit to plan and direct the operation. The degree of control provided with this assignment is the same as that given by attachment, except that the supported unit is not responsible for the logistical and administrative functions of the aviation unit.

8–3. Additional Aviation Support

An operation may require aviation support in addition to that which can be provided by organic aviation. To provide this support, nonorganic aviation units may be made available. These supporting units may be given any of the missions or command relationships discussed above. Supporting units are usually controlled by the headquarters of the supported unit; however, circumstances may require that control be delegated to a lower level. The supported force commander may delegate the same or a lesser degree of control than that which he has been given.

8–4. Planning Factors

Aviation planning is based on tactical plans of units to be supported. To insure mission accomplishment and maximum efficiency, the following factors should be thoroughly analyzed:

a. Mission. Missions assigned to aviation units, as well as the mission of the supported unit, must be considered.

b. Enemy Situation. The location, disposition, and capabilities of enemy units will be considered, with special emphasis on air defense and offense capabilities.

c. Coordination. Complete coordination must be accomplished, including coordination with the supporting aircraft maintenance company. The supporting aviation unit commander has primary responsibility to accomplish coordination.

d. Aircraft Requirements and Future Commitments. In determining the number of aircraft to be committed in support of a specific operation, the aviation commander must consider planned future commitments and relative operational priorities. He must evaluate the materiel readiness of his equipment, compute the approximate number of operational flying hours that will be required to support commitments, and determine when scheduled support maintenance will be required.

e. Crew Requirements. The availability of aircraft crewmembers is as important to the unit's capability for mission performance as the availability of aircraft. Crew requirements must be considered in connection with, rather than separate from, requirements for aircraft. The personnel strength status in officer/warrant officer aviators and enlisted aviation specialists will allow the commander to determine the capabilities for operating available aircraft.

f. Logistical Requirements. Special consideration must be given to logistical requirements, to include POL, ammunition, and maintenance.

(1) *POL.* For extended operations, the location of refueling points should be planned and located so as to become an integral part of the plan of operation.

(2) *Ammunition.* Considering that only small quantities of ammunition can be carried on Army aircraft, reloading facilities must be well organized to permit rapid turnaround times. To expedite operations, reloading sites should be located well forward in conjunction with refueling points.

(3) *Maintenance.* To assure a satisfactory level of aircraft availability, maintenance must be continual. This requires that a maintenance schedule be prepared and complied with. Maintenance planning and scheduling requires the closest working relationships between the supported and supporting units. Upon call of the aviation unit, the supporting aircraft maintenance company furnishes mobile repair teams to make on-site repairs and, when required, to provide field recovery of downed aircraft.

(4) *Special equipment.* Plans must include requirements for any special equipment to be used during the assigned mission.

g. Weather Information and Sources. Weather conditions are an important consideration in operational planning. While low ceilings and limited visibility conditions may restrict aviation operations, such conditions may be used to advantage in shielding the aircraft from enemy observation and permitting the element of surprise. Weather information is received from the air weather service detachment.

h. Maps, Charts, and Photos. All available maps and charts will be used during operation planning and, when possible, will be supplemented by aerial photos.

i. Flight Routes, Altitudes, and Formations. Flight routes, altitudes, and formations must be based on the plan of operation and should afford the best possible concealment offered by the terrain, avoid enemy detection and encounter short of the objective(s), and, if possible, remain within range of friendly supporting fires. Air movement plans must be coordinated with fire support and air defense elements in tactical operations centers and must conform to air defense identification rules and procedures. In an internal defense and development operation, the movement plan must be coordinated with the controlling tactical operations center, air support operation center, or similar host country or combined control center such as the area coordination center.

j. Navigational Aids. Maximum use is made of navigational aids available within the area of operation.

k. Movement Control. The aviation battalion commander is rarely able to exercise the degree

of movement control he desires during administrative or tactical operations. This is particularly true in tactical operations in which control is complicated and must be carefully supervised. Effective supervision of control measures is exercised through the use of the chain of command. Movement control is a vital part of planning for aviation support of combat operations. Movement control measures should be continually stressed in all phases of planning, established as part of the unit SOP, and exercised through the chain of command.

l. Loading Area and Landing Zone Control.

(1) *General.* Control of loading areas and landing zones is of prime importance to prevent congestion of aircraft.

(2) *Loading area.* To prevent massing of supported units and aircraft within the loading area, operations should be timed to provide for the simultaneous arrival of troops and aircraft in the loading area. This will assist in insuring maximum security and rapidity of movement. Also, timing should permit immediate takeoff following loading. Control of the loading area is normally under the overall supervision of the supported unit commander and may utilize pathfinder personnel or unit terminal guidance personnel.

(3) *Landing zone.* Control of the landing zone is normally performed from an airborne CP. To assist in control, pathfinder personnel may be parachuted, rappelled, or airlanded into the landing zone prior to the arrival of the airmobile task force or may be part of the initial helicopter assault. The decision to use pathfinder personnel rests with the airmobile task force commander.

m. Deceptive Tactics. Planning should consider use of tactics which deceive the enemy as to the true purpose or destination of the operation.

n. Crash Rescue Plan. The battalion SOP describes the organization and functions of the crash rescue plan as applied to general operations. The operations order adapts the plan to the specific operation concerned. Included in the crash rescue plan are procedures to be followed by—

(1) Crews of downed aircraft in determining whether to remain with the aircraft to await rescue, or to abandon the aircraft and employ evasion and escape measures to return to friendly lines.

(2) Aircraft crews in locating downed aircraft, rendering aid to the occupants, and directing crash rescue personnel to the scene.

(3) Personnel concerned with the recovery or destruction of downed aircraft.

o. Signal Items. Items such as frequencies, call signs, authentication tables, and air-ground reference signals must be coordinated and issued during aircrew briefings.

p. Evasion and Escape. Aircrews and passengers should be briefed on the route of flight and the procedures to follow should the aircraft be downed, with emphasis on location and identification of rally points. Evasion and escape procedures must be incorporated in detail in the unit SOP (FM 21–77).

Section II. OPERATIONS

8–5. General

Use of SOP will reduce the reaction time and increase the effectiveness of units conducting aviation operations. The SOP should cover the performance of normal tasks within the capabilities of the aviation battalion.

8–6. Airmobile Operations

a. Airmobile operations permit the ground commander to employ the capabilities of his aviation units to form a balanced combat force. The capability to conduct airmobile operations enables the commander to—

(1) Pose a constant threat which may cause the enemy to divert combat force to maintain a strong posture in rear areas to protect his installations and hold key terrain.

(2) Overcome distances and bypass barriers and enemy defenses.

(3) Greatly extend the area over which he can exert his influence.

(4) Deploy his forces more effectively by holding highly mobile reserves in dispersed areas.

(5) Gain a favorable tactical mobility differential over enemy ground forces.

b. The capability for ground combat units and Army aviation units to conduct airmobile operations must be highly developed through frequent airmobile unit training and the development of pertinent unit SOP. The unit SOP is based on those prepared by the lowest headquarters having control over both the ground combat and Army aviation units. A detailed discussion of all aspects of airmobile operations is contained in FM 57-35.

c. When the operation is to be supported by Army pathfinders and/or terminal guidance personnel, complete coordination must be accomplished. Detailed information on pathfinder operations is contained in FM 57-38.

8-7. Armed Helicopters

Armed helicopters are used to supplement the firepower available to the ground commander from ground-based weapons and from means provided by other Services. (FM 1-110 contains a detailed discussion of the employment of armed helicopters.) They can be used in offensive, defensive, reconnaissance, security, and special operations to provide—

a. Responsive aerial firepower against personnel and materiel on area or point type targets.

b. Escort of other helicopters such as those airlifting troops participating in airmobile operations.

c. Extension of the reconnaissance and security capabilities of ground units.

d. An additional means of adjusting indirect fire from field artillery and naval guns.

e. An additional means of target acquisition, target fixing, and the means for initiating requests for close air support by Air Force, Navy, and Marine attack aircraft. Armed helicopters can be used to augment the striking force and to evaluate strikes subsequent to the attack.

8-8. Battlefield Surveillance Tasks

Battlefield surveillance involves the systematic and continuous observation of selected areas by visual side looking aerial radar (SLAR), infrared (IR), and photographic means. The accomplishment of this task provides the supported commander with timely information for combat intelligence with which he can influence the action. Types of surveillance are—

a. Visual. Visual surveillance is accomplished using all aircraft of the aviation battalion whether on a specific surveillance task or in conjunction with another task. Reports of an immediate nature are relayed by radio through intelligence or command channels. If an immediate report is not required, a report is forwarded through intelligence channels following the task debriefing.

b. SLAR/IR. Aircraft assigned at corps and army, equipped with IR and SLAR devices, are used to perform surveillance in support of the division. Simultaneously with the recording of the imagery in the aircraft, a signal is transmitted to the division's ground station where the imagery is recorded for processing and evaluation by intelligence personnel of the division.

c. Photography. Army aviation aerial photography provides photographic coverage which supplements the capabilities of other agencies. Aerial photography includes daylight vertical and oblique photography and night vertical photography. Army aerial photography is limited to spot, strip, and mosaic coverage of small areas.

8-9. Battlefield Resupply Tasks

a. Aviation battalions assist in the movement of supplies and equipment within the combat

zone to augment the ground force commander's capability to accomplish the land combat functions of mobility and logistics. Coordination and planning for resupply tasks will be accomplished at the level possessing the supplies and aircraft required to perform the desired task. In addition to normal aviation task planning, planning for resupply tasks includes the following:

(1) Responsibility for preparing and loading supplies and equipment. This normally is not an aviation unit responsibility.

(2) Method of delivery (air landed or air-dropped).

b. TM 57–210 and operator's manual of available aircraft present detailed information on resupply.

8–10. Other Tasks

Other tasks which can be performed by the aviation battalion include—

a. Reconnaissance support.

b. Command control.

c. Internal defense/development operations support (FM 31–22).

d. CBR support, to include dissemination of CBR agents and conduct of aerial radiological survey.

e. Airlift for movement of patients.

f. Airlift in support of civil affairs requirements (FM 1–100).

g. Participation in military civic action as a part of the overall civil affairs program (FM 41–10).

h. Battlefield illumination.

i. Psychological operations, to include loudspeaker broadcasts and leaflet drop.

j. Aerial messenger service.

k. Aerial laying of communications wire.

l. Movement of signal equipment and personnel to positions inaccessible by ground movement and their resupply.

Section III. AIR TRAFFIC REGULATIONS

8–11. General

The Army air traffic regulation system and its operation are based on principles and procedures that permit maximum use of airspace by unit commanders in responding to the requirements of the tactical situation. Unit command control of aircraft is the basic means of coordinating and regulating the employment of Army aircraft within the division area. Positive air traffic control measures are exercised during instrument flight conditions and/or above a specified coordinating altitude. These control measures are regulated by an air traffic control agency under the control of corps or higher headquarters.

8–12. Visual Flight Conditions

Unit control is the normal method of regulating Army aircraft operating in visual flight conditions throughout the division area. Control measures are specified by the commander of the supported unit and are exercised through the commander of the supporting aircraft unit. Flight plans for aircraft being operated under unit control are regulated by the unit concerned. These flight plans are submitted to the aviation unit's supported unit command post prior to execution of the flight. The progress and position of Army aircraft operating under unit control are monitored on the basis of local flight plans which contain the planned destination, route to be traveled, and estimated time of arrival.

8–13. Instrument Flight Conditions

a. All flights conducted under instrument conditions and/or above specified coordinating altitudes are under the positive control of an air traffic regulating agency from takeoff to landing. This control is initiated when a flight plan is filed with an air traffic regulating agency, either directly or through the facilities of an instrumented airfield. It consists of flight

following, holding instructions, terminal guidance, approach clearance, and any special instructions or in-flight advisories which may be dictated by the tactical situation.

b. Airfields, such as the division instrumented airfield, are capable of providing terminal control to incoming and outgoing aircraft. This control is provided by the unit's landing control personnel (furnished by the support command in the airmobile division), using the ground controlled approach radar and/or radio beacon sets. Terminal control is coordinated with the air traffic coordination plan of the air traffic regulating agency.

c. Procedures for the use of GCA radar or beacon approaches at instrumented airfields will be established and disseminated to aviation units operating in and around the appropriate airfield. These procedures will be forwarded to the air traffic regulating agency for distribution. Malfunctions of approach aids will be reported immediately to the regulating agency and all using units. Details of terminal control procedures are contained in FM 1–60.

Section IV. VARIED ENVIRONMENTS

8–14. General

Basic principles established in field service regulations apply to Army aviation operations in all environments (FM 100–5). When weather and terrain conditions are known in advance, or can be predicted with reasonable accuracy, planning enables a unit to take advantage of favorable factors and avoid or moderate the effects of unfavorable conditions. Advance training of personnel for the specific operational environment is highly desirable, and special equipment for the environment is often necessary for efficient operation. Army aircraft can operate in any geographical environment. Although weather and terrain may limit aircraft operations, the same conditions will frequently limit the operations of nonaviation personnel and vehicles as well. This may result in an increase in the comparative effectiveness of aviation operations. Seldom is planning more essential than in preparing for Army aviation operations in weather and terrain conditions approaching the extremes of environment.

8–15. Deserts

a. General. Fairly flat sandy-to-rocky terrain, high winds, great temperature variations, and vast distances are among the characteristics which influence plans and operations in the desert. Sand and dust that pollute fuel and cause excessive wear to aircraft components also reveal enemy movements. The flat terrain that affords plentiful landing areas for Army aircraft also enables the enemy to observe aircraft movements over great distances. Since dust clouds created by hovering helicopters reveal friendly positions, limit pilot visibility, and cause sand ingestion damage to aircraft components, care must be taken to limit hovering and to employ accepted techniques for takeoff and landing in dust or sand areas. Desert hills and depressions seldom limit the mobility of surface vehicles, and provide little in the way of natural concealment. Since the desert contains little or nothing on which a military force can survive, increased transportation is required to supply men and machines with the necessities for survival and effectiveness. Also, more time is required to perform functions in the desert than in more temperate environments. Air and ground vehicles must be refueled with time-consuming care to prevent fuel contamination by sand. Maintenance is more time consuming because precautions must be taken to protect parts and assemblies from sand and dust. Heat and other factors may reduce the efficiency of personnel. Plans must allow for this increased time requirement in desert operations (FM 31–25).

b. Survival. Desert conditions are among the most difficult in which the human body may be required to function, necessitating the most careful planning and execution of measures to keep troops in effective condition. The commander should rely heavily upon the advice of the surgeon relative to survival in the desert. The scarcity of water under conditions of

desert heat not only contributes to physical discomfort, but can hinder the accomplishment of the mission by rendering troops ineffective. The lack of shade or other shelter may make it necessary to schedule most activities at night in order to avoid or decrease exposure of personnel to excessive heat (FM 21–76).

c. Maintenance. The unfavorable effects of the desert upon machines and equipment of all types, added to the difficulty of resupply of repair parts, greatly increases the importance of preventive maintenance. Sand probably causes more damage to machinery than any other single factor introduced by the desert environment. Air cleaners must be serviced often to prevent their becoming clogged. Engine cooling systems must be carefully maintained and temperature gauges frequently checked for evidence of overheating. Materiel must be protected by covers and moving parts inspected and cleaned often. Communications and other equipment must be protected from heat, sand, and the impact of great temperature fluctuations of the desert. Appropriate publications should be consulted for details on the care of specific items of equipment.

d. Special Equipment. Desert temperatures, which can range from more than 100° F. in the day to below freezing at night, make it necessary to issue equipment designed to protect personnel from heat and cold. Camouflage paint, nets, and similar devices aid in avoiding enemy detection in terrain which offers little for concealment of men and equipment. Aircraft and ground vehicles should carry survival kits and extra water. Basic navigation equipment such as maps and compasses should be included in the survival kits. Emergency radio sets, highly useful in expediting rescue operations, should be issued to each aircraft and, if available. to each ground vehicle operating in the desert environment.

e. Tactics. Desert tactics are normal tactics modified to conform to desert conditions. Factors to be considered in making these modifications include the following:

(1) *Day.* Desert weather is relatively predictable. This predictability is one of the commander's most useful tools in planning desert operations to utilize the mobility provided by Army aviation. Visibility, good during most of the day, is frequently reduced by dust storms during the afternoons. This reduced visibility can be used to conceal some operations. The heat contributes to increased density altitudes resulting in decreased aircraft range or payloads.

(2) *Night.* Conditions in the desert at night are highly conducive to military operations. Dust storms are reduced in intensity and frequency; temperatures are seldom low enough to limit night operations. Visibility is usually good to excellent for both friendly and enemy observers.

(3) *Loading areas.* Difficulty of concealment in the desert can be partially offset by the dispersal of loading areas as widely as practicable.

(4) *Navigation.* Flat desert terrain increases the effective range of line-of-sight radio aids to navigation for aircraft operating at low altitudes. Pathfinders can be employed effectively to guide aircraft and ground vehicles to objective areas and landing zones.

(5) *Deception.* The difficulty of concealment and the increased capability for observation in the desert combine to create a necessity for the fullest use of deceptive tactics and procedures such as false airfield traffic patterns, deceptive reconnaissance, and similar devices.

(6) *Resupply.* Aviation is particularly useful in accomplishing resupply over the great distances of desert operations. This results in a requirement for increased aircraft operations.

(7) *Standing operating procedures.* Procedures should be established to cover contingencies such as the advisability of personnel remaining with or abandoning downed aircraft in friendly or enemy areas, search and rescue, and

the recovery of damaged aircraft in the desert.

8–16. Mountains

a. General. The limited size and number of landing zones, decreased air density at higher altitudes, erratic weather conditions, and steep slopes which can prohibit or severely limit the use of vehicles other than aircraft are among the characteristics which influence plans and operations in mountains. Helicopter payloads may be reduced when landings or takeoffs are planned in less dense air at higher altitudes. Fixed wing aircraft usually operate from airstrips located in or adjacent to mountains. Natural concealment is plentiful for personnel and equipment as well as for ground vehicles and parked aircraft, both friendly and enemy. Although mountain streams may supply sufficient water, practically all supplies must be moved into the area in which operations are conducted. Army aviation can be effectively employed in the supply and resupply of such mountain operations (FM 31–72).

b. Survival. In operations below 8,000 feet, survival is not the critical problem found in more extreme environments. Mountain operations above 8,000 feet are subject to subfreezing temperatures, especially at night, and personnel are generally less effective in the rarefied mountain air until they have completed an acclimatization period of about 14 days (FM 21–75). Army flight crews operating at mountain altitudes will require oxygen in accordance with AR 95–1.

c. Maintenance. Aircraft maintenance problems peculiar to mountain operations are primarily problems of supply and transportation. Abnormal engine wear will occur when helicopters are operated at maximum power settings for extended periods in order to overcome the decreased lift afforded by less dense mountain air. Normally, maintenance of aircraft and ground vehicles can best be conducted at sites adjoining the mountainous areas which can be supplied by surface transportation.

d. Special Equipment. Special personal equipment needed for mountain operations includes warm clothing and sturdy, slipproof footwear. Aircrews should carry with them on all flights sufficient personal equipment to enable them to survive and walk back to friendly lines in the event of forced landings.

e. Tactics. Mountain tactics are normal tactics modified to conform to mountain environments. Factors to be considered in making these modifications include the following:

(1) *Day.* Mountain weather is relatively unpredictable. It is often advisable to prepare alternate plans of action for use in the event of unexpected weather changes. Mountain air affords excellent visibility on clear days. Aerial observers can cover large areas of mountainous terrain from helicopters or fixed wing aircraft. Air currents over and adjoining mountain ridges require great caution on the part of flight crews. Downdrafts may cause aircraft to suddenly lose altitude and come dangerously close to mountain slopes.

(2) *Night.* Mountainous terrain presents special consideration for night aircraft operations. Aircraft may operate effectively and safely singly or in pairs, but formation flights normally are undertaken only under optimum conditions. Ground observation is difficult even on moonlit nights because of heavy shadows, hence land navigation problems are magnified. Through the use of ground navigational aids and pathfinders, limited night operations by well-trained aviation and ground personnel are feasible.

(3) *Loading areas.* It is usually possible to establish adequate loading areas in mountains especially for helicopter operations. Large-scale operations may require the use of multiple loading areas. Where practicable, loading areas should be established in favorable terrain where aircraft can be refueled, and personnel and equipment picked up for delivery to landing zones located in less accessible terrain.

(4) *Navigation.* Accurate maps are required for effective visual navigation in mountainous environments. Navigation by electronic means may be restricted by the line-of-sight characteristics of many such systems. Pathfinders can supply electronic or other navigation aids near the objective area for use during an operation.

(5) *Deception.* Deceptive landings, traffic patterns, and similar devices, likely to be observed by the enemy from the excellent observation points provided by the mountains, can be very effective if carefully planned and executed.

(6) *Resupply.* Army aircraft can accomplish resupply to troops located in mountains in a small fraction of the time required by other forms of transportation. Airdrop, low level extraction, and airlanded deliveries can be made to otherwise virtually inaccessible points.

8–17. Jungles

a. General. The limited number of access roads, the presence of many natural features providing concealment, and rapid deterioration of many items of equipment are among the characteristics which influence plans and operations in the jungle. Dense jungles, usually sparsely inhabited, contain few or no roads which are suitable for military vehicles. Heavy jungle growth and extensive swampy areas make road construction difficult. Leafy overhead foliage can completely shield the jungle floor from observation from above. Occasional clearings afford helicopter landing areas; runways for fixed wing aircraft may have to be hacked out of the jungle (FM 31–30). Men and equipment required to prepare jungle landing pads may be lowered from hovering helicopters by approved rappelling techniques and other devices.

b. Survival. The jungle environment presents a far smaller threat to survival than deserts and cold weather areas. Navigation is often complicated by the many restrictions to long range observation from the jungle floor. A compass or a direction finding technique is necessary. Water can usually be located, but must be boiled or otherwise purified before drinking. There is usually sufficient edible vegetation, or other source of food, to support a man trained in jungle survival (FM 21–76).

c. Maintenance. Maintenance of all types of equipment in the jungle is complicated by the hot humid atmosphere. Fabric, rubber, leather, and similar materials deteriorate rapidly. Unprotected metal surfaces will soon rust or corrode. Aircraft instruments and delicate communications equipment will become inoperative unless properly stored. Optical lenses can be damaged by fungus and other growths promoted by the jungle atmosphere. Appropriate publications should be consulted for details on the care of specific items of equipment.

d. Special Equipment. Electronic aids to navigation are particularly useful to aircrews because of the sameness of terrain which makes up many jungle areas. Jungle survival kits should be carried in all aircraft being operated over these areas. Personal equipment should include insect repellent, mosquito nets, and other protective gear.

e. Tactics. Jungle tactics are normal tactics modified to conform to jungle environments. Factors to be considered in making these modifications include the following:

(1) *Day.* Jungle weather is relatively predictable. Temperatures are high, differing little with the seasons of the year. Heavy rainfall is to be expected during the rainy seasons to which most jungles are subject. Most jungle terrain is very rugged, with deep valleys and steep ridges alternating. The combination of heavy rainfall and uneven terrain creates numerous rivers and streams. As jungles are located near the equator, days and nights are about equal in length and vary little with the seasons of the year. Jungle fog and rain can be predicted with considerable accuracy and operations can be planned to take advantage of these weather factors for concealment of aircraft while en route

to objective areas as well as while conducting other missions. Turbulence just above treetop level can be severe enough to interfere with nap-of-the-earth flying. Some jungles contain sufficient landing areas for rotary and fixed wing aircraft; others are so dense they require prior selection and/or preparation of landing areas for helicopters.

(2) *Night.* Formation flying is very difficult over the jungle at night except under the very best conditions of moonlight, or when lights are used to maintain aircraft separation. Pathfinders and electronic navigation devices can increase the night capability of Army aircraft in jungle operations.

(3) *Landing zones.* Security of jungle landing zones is very important, particularly when the enemy uses raids as a means of obtaining supplies. Also, the jungle offers many opportunities for ambush of these zones if not protected by troops or located in secure areas.

(4) *Navigation.* Tree-covered jungle areas, often extending for many miles, may contain little or nothing for use as visual navigational checkpoints. This is especially significant when flights are conducted at low levels without an aircraft being operated at a higher altitude to assist in navigation. Electronic aids are very useful in navigation over the jungle.

(5) *Deception.* Personnel operating in the jungle can see aircraft flying overhead much more readily than persons flying overhead can see the jungle floor. Detailed reconnaissance of a given jungle area can alert the enemy to the fact that the area is of interest to the aerial observers. Deceptive reconnaissance of several areas can decrease the enemy's chances of predicting the location of the objective area or area of interest. All deceptive tactics which can be devised should be used in jungle operations.

(6) *Resupply.* Aerial resupply in the jungle can be accomplished with less chance of enemy ambush or interference than resupply by use of surface transportation. Preselection of landing zones and loading areas and coordination with supplied units are especially important to prevent supplies from falling into enemy hands.

(7) *Standing operating procedures.* Procedures should be established to cover contingencies such as the advisability of personnel remaining with or abandoning downed aircraft in friendly or enemy areas, search and rescue, and the recovery of damaged aircraft in the jungle.

8–18. Cold Weather

a. General. Snow and ice, high winds, extreme cold, variable visibility conditions, limited or nonexistent communications, and lack of food and shelter are among the characteristics which influence plans and operations in the cold weather environment. As in most extremes of environment, cold areas contain little to support military operations. Many items of equipment deteriorate rapidly or otherwise become inoperative in extreme cold. It may be necessary to remove oil from aircraft after each flight, store it in a warm place, and replace it before the next flight. Batteries for aircraft and ground vehicles often require similar treatment. Such operations take time. The increased time required for the performance of necessary functions must be considered in planning cold weather operations (FM 31–71).

b. Survival. When fuel for fire can be found, ice or snow can be melted for drinking water. Food is more likely to be a serious problem. A man not trained in survival will soon succumb to the extreme cold if deprived of facilities for protecting himself from the environment (FM 21–76).

c. Maintenance. Maintenance of all types of equipment becomes one of the most important, and most difficult, functions to be accomplished in cold weather. The greatest problem in maintaining aircraft will often be that of preparing them for flight. Once airborne, aircraft performance is likely to be very good because of the decrease in density altitude problems encountered in cold weather as compared to those at similar altitudes in deserts and other warm environments.

d. Special Equipment. Personnel require special clothing, gloves, and shelters in order to remain effective in the cold environment. Aircraft winterization kits may include protective covers and skis; special cold weather lubricants will be needed. Cold weather survival kits should be carried in all aircraft and ground vehicles operating in the cold weather environment.

e. Tactics. Cold weather tactics are normal tactics modified to conform to cold weather environments. Factors to be considered in making these modifications include the following:

(1) *Day.* Snow covered areas may offer a lack of contrast with the sky which completely obscures the horizon. Instrument flight is therefore necessary, at times, on a clear day. Violent storms occur almost without warning. The scarcity of weather observation posts in most cold weather areas limits the warning of such storms. Dark objects stand out clearly against a snow and ice background, and can be seen from a great distance during periods of good visibility. This advantage is available to both friendly and enemy observers. Severe storms prohibit most ground and flight operations, especially in mountain areas of the cold environment.

(2) *Night.* Ground operations in cold weather areas may be more successfully conducted at night than during the day. This is because of the difficulty of concealment from enemy observers during daytime operations in periods of good visibility. Except during periods of optimum visibility, flight operations in polar areas will be limited largely to those in which electronic navigation aids can be employed.

(3) *Landing zones.* Landing zones for helicopters and ski-equipped airplanes are plentiful in most cold areas. Frozen lakes provide good landing zones for both types of aircraft. Firm snow and ice also make good landing facilities. Hovering over loose snow should be held to an absolute minimum to avoid creating the blinding snowswirls which may be caused by helicopter downwash. Marker panels can enable both friendly and enemy observers to locate landing zones in snow and ice.

(4) *Navigation.* Magnetic variation may render magnetic compasses useless in polar regions. Checkpoints, often not plentiful under the best conditions, may be made unrecognizable by snowstorms. Electronic aids to navigation will greatly increase Army aviation capabilities in cold environments.

(5) *Deception.* Tracks left in the snow by personnel and vehicles can supply information to enemy observers. Deceptive tracks and installations may be used to confuse such observers. Deceptive reconnaissance and similar ruses, adapted to cold weather environment, may be highly effective.

(6) *Resupply.* Resupply requirements are magnified by the fact that polar areas afford little upon which a military force can survive. Track vehicles can operate over firm snow and ice, aircraft can also be very useful in accomplishing resupply in the cold weather environment.

(7) *Standing operating procedures.* Procedures should be established to cover contingencies such as the advisability of personnel remaining with or abandoning downed aircraft, search and rescue, and the recovery of damaged aircraft in cold weather.

CHAPTER 9

COMMUNICATIONS

Section I. GENERAL

9–1. Areas of Responsibility

a. The battalion commander is responsible for communications within the battalion, and for the battalion functioning as part of the next higher unit's communications system. The communications system provides the commander with parallel means of communications for efficient command, control, and administration of his unit.

b. The signal officer advises the commander and staff on matters pertaining to communications and supervises the battalion communications section. For a detailed list of duties of the signal officer, see chapter 4.

c. The responsibility for communications among units is subject to the following general rules (FM 24–1):

(1) The higher unit is responsible for establishing communications with the lower unit (including attached units).

(2) A unit supporting another unit establishes communications with the supported unit.

(3) The unit on the left normally establishes and maintains lateral communications with the adjacent unit to its right.

9–2. Signal Orders

a. Signal Operation Instructions (SOI). The SOI is a type of combat order issued for the technical control and coordination of communications within a command. The instructions include items subject to frequent change covering codes and ciphers, radio call signs and frequencies, telephone directory, and visual and sound signals. Current items are listed in the index to the SOI. When authorized, the battalion signal officer prepares necessary extracts from the supported or assigned higher unit's SOI.

b. Standing Signal Instructions (SSI). Standing signal instructions contain items of operational data not subject to frequent change and instructions for use of the SOI. They are prepared by a division signal officer, or higher echelon, and may be issued as a separate publication or consolidated in the SOI.

c. Standing Operating Procedures (SOP). The communications portion of the battalion SOP is a set of instructions prescribing the manner in which routine jobs are accomplished within the unit in the absence of other instructions. In the battalion, the SOP is based on, and conforms to, that of the higher unit to which assigned or being supported. The battalion signal officer prepares the communications portion of the battalion SOP for the commander's approval. An SOP is particularly applicable to the communications section because many of its operations are the same, regardless of the employment. FM 24–16 contains a detailed discussion of signal orders.

Section II. COMMUNICATIONS SYSTEM

9–3. General

The signal system of a field army includes an army command communications system, an army area communications system, an organic command communications system for each corps, and an organic communications system

for each division and other separate units within the field army.

a. The army command communications system provides a command signal center at each echelon of field army headquarters and means of communications to each major subordinate command.

b. The field army area communications system is composed of a network of area signal centers interconnected by trunk circuits under centralized control. Each signal center provides signal facilities for support to units and activities within a specifically assigned geographic area of responsibility. This system covers the area from army rear boundary, forward to division rear boundaries to include corps areas.

c. The corps command signal communications system provides communications facilities from corps headquarters to corps troops and assigned or attached divisions. The corps communications system is provided in addition to the portion of the field army area system which operates within the corps boundaries.

d. Standard divisions have both a command and an area communications system. The command system provides command signal centers for each echelon of division headquarters and support command as well as means of communications to each major subordinate command. The area system is composed of area signal centers normally located in brigade rear areas to support units and activities within a specifically assigned geographic area of responsibility. FM 11–50 contains a detailed discussion of division communications systems.

e. Airborne divisions basically have only one type communications system—an area type which is command oriented; that is, area signal centers are in direct support of specific subordinate units. FM 11–57 contains a detailed discussion of airborne division communications systems.

f. The airmobile division has only a command type signal system.

g. Divisional aviation battalions are included in the command communications system of parent divisions. For details of communications for divisional aviation battalions, see paragraphs 9–7 and 9–8. Nondivisional aviation battalions normally are tied into the nearest area signal center to supplement their organic means for external communications. The area signal center may be either a part of the army area system or a division area system depending upon location of the aviation battalion. Signal center personnel provide wire lines to the battalion as directed by higher headquarters to furnish sufficient circuits through the area system to meet the needs of the battalion.

9–4. Signal Center

A signal center is a groupment of signal communications facilities installed, operated, and maintained by a signal corps unit. Each signal center normally provides the following: communications center, switching central, technical control center, and appropriate external means of communications. There are two types of signal centers—command signal centers and area signal centers.

a. A command signal center provides communications support to a specific command headquarters and to units located in its immediate vicinity.

b. An area signal center provides communications support, wtihin its geographical area of responsibility, to all units requiring signal center facilities to supplement their organic means for external communications to higher, subordinate, or adjacent units.

Section III. AVIATION BATTALION COMMUNICATIONS SYSTEMS

9–5. Battalion Communications Personnel

a. Battalion Communications Section. The battalion ground communications system is installed, operated, and maintained by the communications section which is organized as discussed below:

(1) The *communications chief* assists the signal officer by directly supervising

the enlisted men of the section in the installation, operation, and maintenance of the battalion communications and electronic navigation systems.

(2) *Radio equipment repairmen* perform organizational maintenance by inspecting, testing, and repairing signal equipment assigned to the battalion. They maintain the authorized level of repair parts.

(3) *The radio/teletypewriter team* installs and operates the radio/teletypewriter set, receives and transmits messages, and establishes and posts station logs.

(4) *The switchboard operator/field wireman team* installs, operates, and maintains the switchboard. This team, with the assistance of sections having organic telephones, installs the battalion wire system.

(5) *The landing control operator team* provides ground controlled approach (GCA) radar assistance for letdown and landing approach of aircraft under instrument conditions. The team installs the GCA radar at the airfield. In the airborne division aviation battalion, this team is not part of the communications section.

(6) *The control tower operator team* monitors and coordinates aircraft arrivals and departures on a 24-hour basis. In the airborne division aviation battalion, this team is *not* a part of the communications section.

(7) *The message center team* processes incoming and outgoing messages on a 24-hour basis.

b. Airmobile and General Support Company.

(1) The airmobile company has an assigned communications chief, avionics electrical equipment repairmen, radio mechanic, switchboard operator, and wireman. Selected personnel of the company may be further trained to operate organic radio sets and to man the switchboard.

(2) The general support company has an assigned switchboard operator, a wireman, and radio teletypewriter operators. Selected personnel of the company may be further trained to operate organic radio sets and to assist in manning the unit switchboard.

9–6. Means of Communications

Signal communications include all means of conveying information of any kind from one person or place to another except by direct conversation and mail. The means of communications available to the aviation battalion are wire, radio, messenger, and visual and sound signals. The composition of the means depends on the personnel, equipment, and transportation provided by the TOE and by the higher commander. The various means of communications have different capabilities and limitations. They are employed so that they complement each other. Placing entire dependence upon any one means should be avoided.

9–7. Battalion Wire Communications

Figure 9–1 illustrates the type wire system utilized by divisional aviation battalions.

a. The divisional aviation battalion normally is provided with a direct support carrier and radio relay team from the division signal battalion for access into the division command multichannel network. This multichannel link provides the external telephone and teletypewriter communications required by the aviation battalion which consists of a minimum of—

(1) A sole user telephone circuit between the battalion and airfield operations center and the G2/G3 air element at the division TOC.

(2) Two common user telephone circuits between the aviation battalion switchboard and the division switchboard.

(3) A teletypewriter circuit from the aviation battalion to the division teletypewriter switching central.

b. The battalion communications section, with assistance from the users, installs the internal

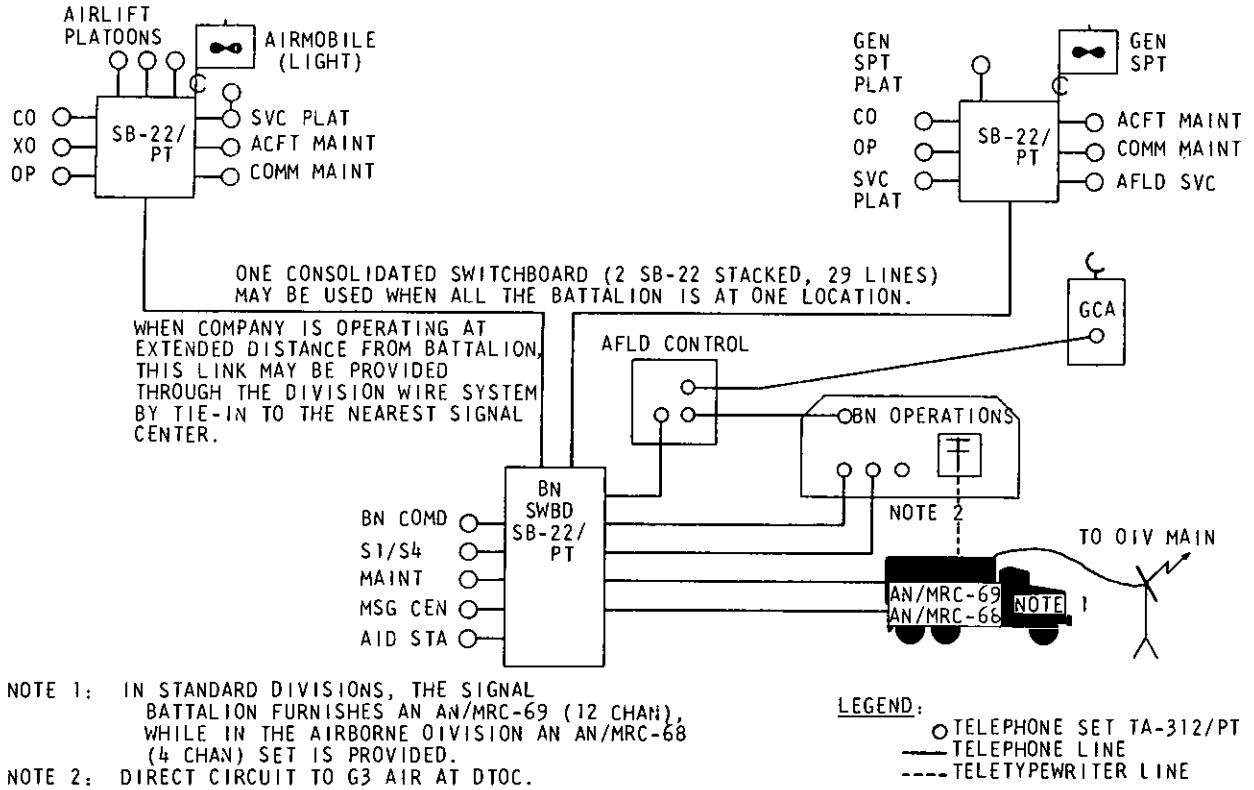


Figure 9–1. Type wire system, aviation battalion, infantry division/airborne division.

wire system for airfield and command post communications, and externally to other elements of the battalion as feasible.

b. Nondivisional Aviation Battalions. Nondivisional aviation battalions and the aviation group headquarters normally will be tied into the nearest area signal center to provide the telephone and teletypewriter circuits required for command/control, air operation activities, and service support functions.

9–8. Battalion Radio Nets

a. General. Radio nets within the aviation battalion headquarters and subordinate units are primarily for organic communications to include communications between major battalion units. A limited number of radio equipments are provided for monitoring warning broadcast systems and for communications with echelons above battalion. FM and AM radios normally are used as an initial means of communications, particularly when other means such as wire or radio relay are unavailable or unsuitable. As other means become available, the use of radio should be reduced and radio stations should be placed on standby or on listening silence as directed by the situation. Although radio nets are designated functionally (command, intelligence, and the like), traffic and other considerations frequently dictate that the nets be combined and used for more than one type of traffic. Figures 9–2 and 9–3 illustrate the type radio nets found in the aviation battalion infantry and airborne divisions, and the normal composition of each net.

b. Internal Radio Nets. The battalion's internal radio nets are described below:

(1) *Battalion command net (FM-voice).* This net provides the battalion com-

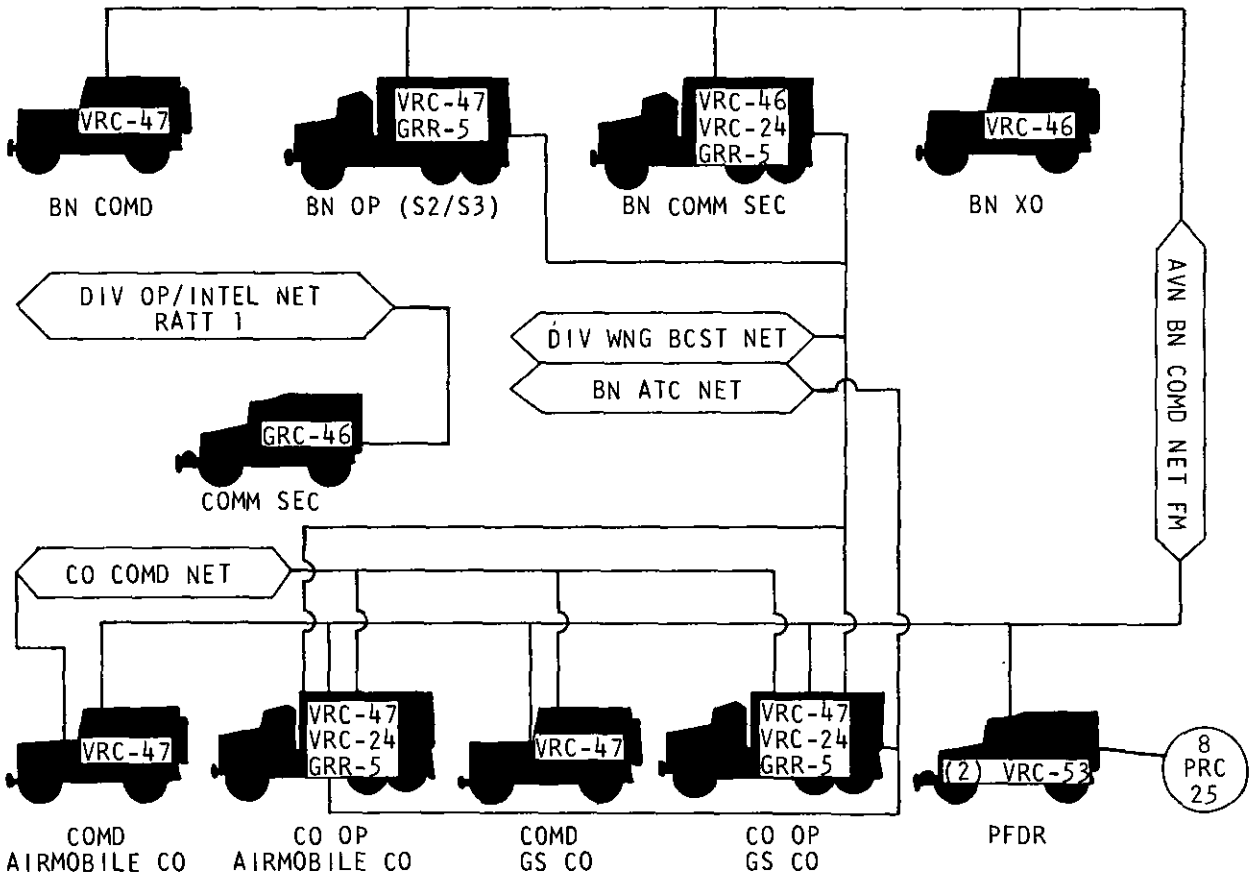


Figure 9-2. Type radio net, aviation battalion, infantry division.

mander with a means for command and control of the battalion. When required by the tactical situation, logistical traffic may be passed over this net. The net control station (NCS) is normally the battalion operations section.

(2) *Battalion operations net (SSB-voice).* This net is found only in the airborne division aviation battalion. All traffic of an operational nature is passed via this net. The NCS is normally the battalion operations section.

(3) *Battalion air traffic control net (UHF-voice).* The operation sections of battalion headquarters and the various companies operate stations in this net for control of division airspace. Each aircraft has organic VHF-UHF radio equipment to enter the net as specified by the SOP or as otherwise required.

(4) *Airmobile and general support company radio nets.* The airmobile company and the general support company operate stations in the appropriate battalion nets and they monitor a higher headquarters warning broadcast net. In addition, each company establishes the following nets for command control of its subordinate elements and for logistical traffic.

(a) *Company command net (FM-voice).* The NCS station is operated by the company operations section.

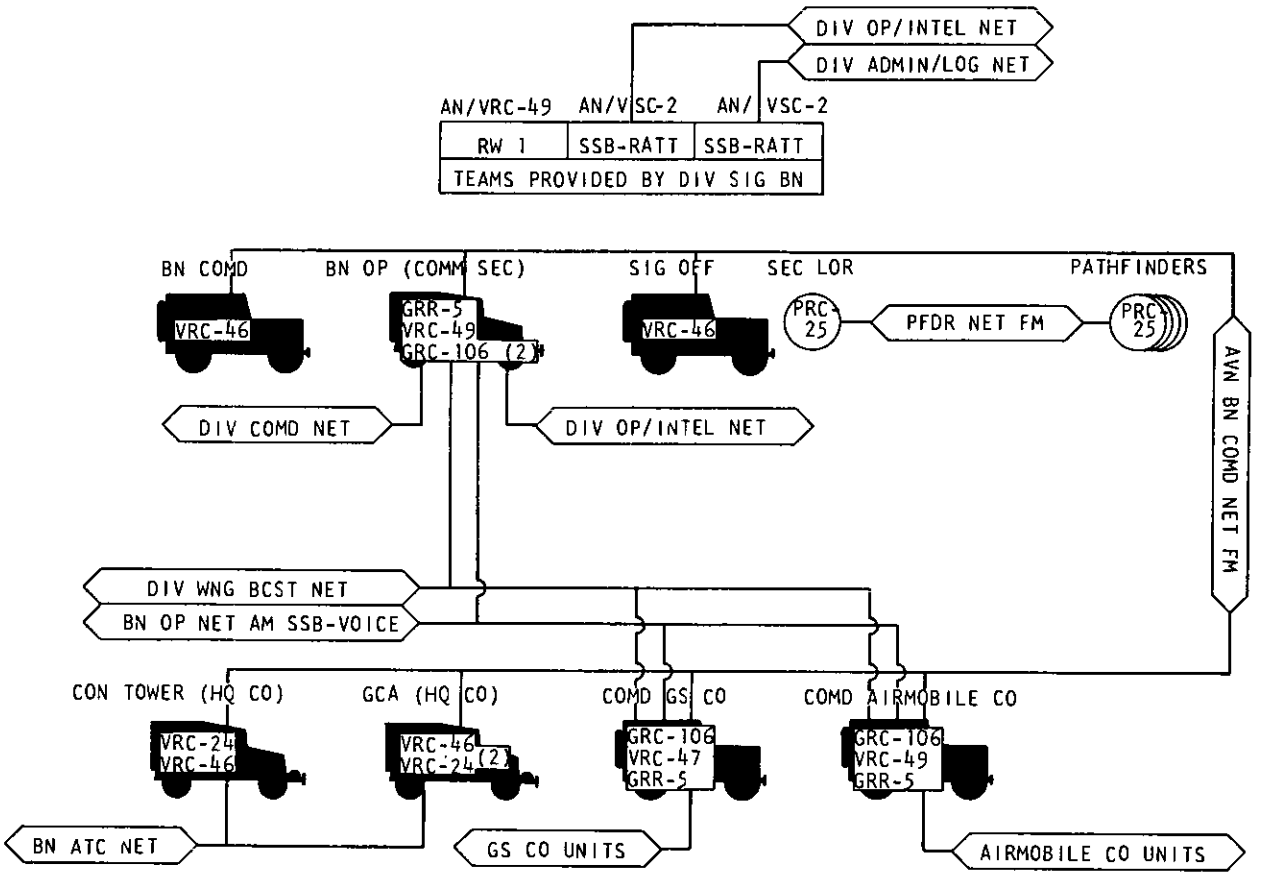


Figure 9–3. Type radio net, aviation battalion, airborne division.

(*b*) *Platoon command net* (*FM-voice*). Each of the three airlift platoons of the airmobile company and the general support platoon of the general support company maintain such a net for internal command and control.

c. External Radio Nets. External radio nets in which the battalion operates are described below.

(1) *Division command net* (*FM-voice*). This net is used by the division commander for command and operational control and to issue orders to his staff and to commanders of certain immediate subordinate units. In an airborne division, this net is designated an operations-intelligence net since the airborne division commander has an AM/SSB voice command net.

(2) *Division command net* (*AM–SSB-voice*). Currently, this net is found only in the airborne and airmobile divisions. It serves the same function as the FM command net described above.

(3) *Division operations intelligence net* (*RATT No. 1*). This net is used to control operations and intelligence functions within the division. The communications section of the aviation battalion, infantry division, has organic equipment to operate a station in this net. The aviation battalion,

airborne division, is furnished a direct support RATT team by the division signal battalion for operation in this net.

(4) *Division administrative-logistics net (RATT No. 2).* This net is used as a means of passing administrative and logistics traffic between the division support command and certain units of the division. The aviation battalion, infantry division, does not operate in this net; however, the aviation battalion, airborne division, is furnished a direct support RATT team by the division signal battalion for operation in this net.

(5) *Division warning broadcast net (AM-voice).* The purpose of this net is to broadcast information concerning CBR attacks, nuclear strikes, and enemy air activity. The aviation battalion and each company have organic receivers to provide the capability to monitor this net.

9–9. Alternate Means of Communications

Various other means of communications will be used when the primary wire and/or radio means are not available or when other means can best serve the purpose.

a. Messenger. Messenger is often the most secure means of communication. Messenger service is flexible and reliable. Messengers are the only means available within the battalion for transmitting maps and documents. Messengers are used when security dictates or when they can deliver a message faster than it can be delivered by electrical means. Scheduled messenger service to higher headquarters normally is provided by the division messenger service.

b. Visual Signals. Visual signals are transmitted by flags, lights, pyrotechnics, panels and arm-and-hand signals. They are suitable for transmitting prearranged messages rapidly over short distances. Visual signals are easily misunderstood and are vulnerable to interception.

c. Sound Signals. Sound signals are transmitted by whistles, weapons, and other noise-making devices. They are used primarily to attract attention, transmit prearranged messages, and spread alarms, and are kept simple to prevent misunderstanding. They are a rapid means of communication over short distances.

Section IV. COMMUNICATIONS SECURITY

9–10. General

Communications security is the protection resulting from all measures designed and used to prevent or delay unauthorized persons gaining information of military value from friendly communications sources. The three elements of communications security are physical, cryptographic, and transmission security. Each commander is responsible for communications security in his unit. Communications security orders and regulations must be understood and practiced by everyone concerned with communications. In the choice of communications means, requirements for both security and speed must be considered. Regulations require that classified messages be encrypted when transmitted over electrical means. However, in actual combat operations, the commander or his authorized representatives may authorize classified messages other than TOP SECRET (TOP SECRET messages will NEVER be transmitted in the clear over electrical means, AR 380–51) to be sent in clear text *when the two following conditions exist at the same time:*

a. When there is insufficient time for encrypting, *and*

b. When the enemy will not have time to act upon the information contained in the message.

9–11. Physical Security

Physical security consists of the physical means taken to safeguard classified communications equipment and materials from access by

unauthorized persons. Special attention must be given to SSI/SOI items and cryptomaterial, including their production, distribution, storage, and final disposition when superseded or no longer needed. A complete SOI item should never be taken forward of the battalion command post. SOI extracts carried in Army aircraft pertain only to material essential to that particular operation or flight. They are prepared so that they can be destroyed easily. When an SOI item or extract is compromised, the fact must be reported and the item changed immediately. SOP prescribes emergency destruction of equipment and classified documents to prevent capture and enemy use. Classified material and equipment carried in aircraft will be destroyed if the aircraft is forced down and capture is imminent.

9–12. Cryptosecurity

Cryptosecurity is that component of communications security which results from the provision of technically sound cryptosystems and their proper use (AR 380–40 and AR 380–41). Use of unauthorized cryptographic systems is strictly forbidden under the principle that a weak code or cipher is worse than none. Time spent in encrypting gives a high return in security. Cryptographic equipment is available for use with teletypewriter systems to provide automatic enciphering and deciphering.

9–13. Transmission Security

Transmission security includes all measures to protect transmissions from interception, traffic analysis, and imitative deception. Radio is particularly susceptible to interception and resulting traffic analysis, direction finding, jamming, and deception by imitative transmissions. Radio is the most insecure means of communication. Prescribed radio-telephone procedures and authentication systems must be employed to protect radio transmissions. The authentication system of tactical air-ground communications is either that of the major command to which the aircraft are organic or that of the unit being supported. Message authentication is extremely important in aircraft radio relay operations and must be included in all SOI.

CHAPTER 10

ADMINISTRATIVE MOVEMENTS

Section I. GENERAL

10–1. Introduction

An administrative movement is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy interference, except by air, is anticipated. Unlike tactical troop movements in which adaptation to the tactical situation is the primary consideration, administrative movements are concerned with the economical and efficient use of all facilities at the commander's disposal. Administrative movements by road in an internal defense/development environment will be rare, especially during phase II or III insurgency. Convoys must be prepared to conduct counterambush actions. Armed aerial escort is an effective ambush deterrent and counterambush weapon.

10–2. Methods of Movement

Organic aircraft and ground vehicles normally are used in the accomplishment of aviation battalion movements. Additional vehicles may be attached for the move. Foot, rail, and water may also be used. Moves utilizing USAF aircraft are discussed in FM 101–10-series. Whatever the method or methods employed, detailed planning and control are necessary if the battalion is to reach its destination at the desired time and in an effective condition.

Section II. PLANNING AND PREPARING FOR MOVEMENTS

10–3. Standing Operating Procedures

Many of the details relating to administrative movements, including the organization and asembly of units, control and coordination of the unit during movement, and deployment of units at the destination, should be included in the unit SOP. Consideration should be given to differences in speed of the types of aircraft and ground vehicles to be used. SOP should be revised as necessary to reflect experience gained from training for movements as well as from actual movements.

10–4. Planning

The planning of an administrative move follows logical channels starting with the determination of who and what is to be moved, what transportation means are available with which to make the move, the air and ground routes to be used, and the destination of the move. These determinations are then expanded to include the organization of the personnel and equipment to be moved, and the best method of utilizing the available means. Resupply and other requirements imposed by the distance to be covered, characteristics of the route, and the nature of the destination are also matters to be considered.

10–5. Training

Training for administrative moves should cover planning and preparation for the move and the conduct of the move. In addition to increasing the ability of the battalion to conduct moves efficiently, the experience gained from these exercises provides data as to the rates of march for the air and ground columns,

resupply requirements, and other factors for incorporation in the SOP.

10–6. Warning Order

Normally, the battalion commander will issue a warning order to alert the units of the expected movement to provide an opportunity for making advance preparations. The warning order should contain as much information concerning the departure time for each element, purpose of the operation, and the destination as circumstances and security procedures permit.

10–7. Route Reconnaissance Party

Organic aircraft may be used to conduct reconnaissance of the route being considered for the movement. This reconnaissance should include the reporting of information on the condition of the route and its suitability to the type of vehicles to be used, the distance to the destination, map errors, areas of possible concealment from which an ambush might be conducted, and the nature of the destination. It may be necessary for a ground party to conduct a more detailed investigation of specific conditions reported by aerial observers, or for an engineer unit to make repairs to bridges and roadways along the route. Aerial reconnaissance of the route being traveled should be continued throughout the movement to detect and report to the commander any change in conditions which may influence the conduct of the operation.

10–8. Quartering Party

The quartering party proceeds to the destination in advance of the battalion to determine the need for security measures and to arrange for the positioning of units of the battalion as they arrive in the area.

10–9. Trail Parties

a. Aerial. Aircraft participating in the movement are followed by an aerial trail party. This party includes maintenance personnel and equipment to assist aircraft experiencing difficulty prior to or during takeoff and downed aircraft forced to leave formation because of mechanical difficulties en route. Where aircraft are divided into serials, possibly to allow for the speed differentials of different type aircraft, it may be necessary to provide a trail party for each serial.

b. Motor. The motor trail party is usually the last ground element to depart the vacated area. It follows the motor column to warn traffic approaching from the rear, to prevent straggling, and to dispose of disabled vehicles. If the motor column is divided into serials, consideration is given to providing a trail party for each serial.

10–10. Column Organization

a. Aerial. The aerial column is organized primarily to insure an efficient move and to cause the aircraft to reach the destination at the desired time. Where aircraft involved are different types, and operate at different flight speeds, consideration should be given to dividing the aircraft into serials based on flight speeds. It may be advisable to use different flight routes for different types of aircraft to simplify traffic problems such as those experienced when faster aircraft overtake slower aircraft. Consideration must also be given to traffic problems caused by the simultaneous arrival at the destination of more aircraft than can be efficiently landed and dispersed.

b. Motor. The motor column is organized primarily to insure an efficient move and to cause vehicles to reach the destination at the desired time. Vehicles can be kept in close column by adapting the march rate to the speed of the slowest element of the column. Vehicles can be divided into serials if it is desired to utilize their speed differentials by dispatching faster vehicles in the first serial to prevent their being delayed by slower vehicles.

Section III. MOTOR MOVEMENT

10–11. General

Aviation battalions are largely mobile through use of organic air and motor vehicles. That part of an aviation battalion not moved by aircraft normally is moved by motor vehicles. The proportion of a movement accomplished by motor vehicles will vary with the type aircraft organic to the battalion and with any nonorganic transportation made available for the move. The environment of operations influences the lift capability of aircraft and can impose a greater or lesser requirement than expected upon motor transport. In some cases aircraft can make two or more trips while motor vehicles make one trip, having the effect of increasing the mobility of the unit. FM 55–35 contains information concerning motor transport operations.

10–12. Nonorganic Transportation

Standing operating procedures will be established in advance to provide information needed for requesting nonorganic motor transportation. The SOP should contain a sample request for motor transportation and details as to the number of passengers or the tonnage and type of cargo to be transported. Usually, specific types of motor vehicles will be selected by the motor transport officer to meet the requirement. The battalion commander will be informed of the number and type of motor vehicles to be assigned, the regulating point, and the time at which vehicles will be placed under his control.

10–13. Supervision of the Column

The commander utilizes the superior range or vision made available by organic aircraft to aid in supervision of the column during movement. Supervision is accomplished through information relayed from aerial observers to the commander, or the commander may observe the column from the air and issue instructions by use of aircraft radio. Panels, signal lights, and similar devices will aid aerial observers in identifying ground vehicles.

10–14. Time Interval

Time gap (time interval) is the interval, expressed in time, between the rear of any component of the column and the front of any following component as they pass a given point. This interval, adaptable to aircraft and ground vehicles, is especially useful in preventing excessive separation of elements of the column or a pileup of ground vehicles following too closely behind an element which is slowed or stopped by a terrain feature or other circumstance.

10–15. Halts

En route halts during administrative motor movements are usually scheduled in the movement order or in the SOP. All units halt simultaneously at the specified time or upon receipt of a prearranged signal. A similar procedure is used to resume the movement. Halts allow time for motor maintenance, rest, and feeding. Details may be posted to watch for hostile aircraft or other threats during halts, and vehicles will be dispersed as required by the situation.

10–16. Communications During the Move

Radio is usually the best means of communication during administrative motor movements in which the necessary equipment is available and security conditions permit. Visual signals by use of panels, flags, lights, arm-and-hand, and similar devices are often useful. Whistles, vehicle horns, and other audio signals are useful if distances between elements are not great. Messengers can deliver written or oral instructions during the move. Whatever the communications method used, the efficiency of administrative motor movements can be increased by prearrangement of signals in standing operating procedures.

Section IV. RAIL, AIR, AND WATER MOVEMENT

10–17. Rail

a. The division transportation officer coordinates the movement by rail with appropriate transportation agencies. The unit being moved and the transportation office which has transportation responsibility for the area in which the move originates are jointly responsible for the movement of troops and equipment by rail. Although aviation battalions are relatively mobile using organic aircraft and ground vehicles, rail is the most efficient method of accomplishing or supplementing some administrative moves. A move to a port of embarkation, preparatory to departing the continental United States, is an example of a move in which rail can be the most efficient method of movement.

b. Preparations for the rail movement of an aviation battalion are coordinated with the local transportation agency. The unit being moved prepares and implements plans for the move in accordance with directives, and furnishes the transportation agency with details of the personnel and equipment to be moved. The division transportation officer advises on matters relating to the rail movement including the transportation portion of the training program. During the training and alert phases, key personnel are trained in the execution of their duties during the movement, and all personnel and equipment are made ready for the move. The order directing the movement will specify the time and place at which the unit will entrain.

c. An advance party may be sent to the destination to make arrangements for the unloading of personnel and equipment and to establish assembly areas at the new location. While the train is en route, it is controlled and operated by the railroad personnel responsible. The troop commander, appointed by the battalion commander, is responsible for the provision of intermediate services, the safety and discipline of personnel and the care of equipment while en route. Details on rail movements are contained in FM 101–5 and applicable field manuals of the 55-series.

10–18. Air

a. The planning and preparation for movement of an aviation battalion by U.S. Air Force aircraft is similar to that conducted by other means. The unit being moved and the transportation office which has transportation responsibility for the area in which the move originates are jointly responsible for the movement. In addition to the obvious advantage of speed of travel offered by aircraft, it may be possible for the transport aircraft to land at the location of the unit to be transported and move the unit directly to the ultimate destination. This procedure, when practicable, eliminates the move from the unit's location to the port of embarkation.

b. Training and other preparations for air movement should stress the importance of being ready to load personnel and equipment without delaying the transport aircraft assigned to accomplish the move. Preparations for the move must include dismantling equipment, as necessary, to conform to dimensions of the aircraft.

c. The flight will be conducted by Air Force personnel. The unit being moved is responsible for the loading, en route supervision, and unloading of personnel and equipment. Equipment to be airdropped from Air Force aircraft is delivered to the aircraft tailgate by the Army unit concerned and loaded aboard the aircraft by Air Force personnel. FM 57–35 contains information on airmobile operations.

10–19. Water

a. Water transport is often used to accomplish the movement of Army units to oversea destinations. The unit being moved and the transportation office which has transportation responsibility for the area in which the move originates are jointly responsible for the movement. The U.S. Navy operates or supervises the operation of vessels used for such movements.

b. The battalion commander, in coordination with the transportation officer, prepares plans for loading and unloading personnel and equip-

ment in accordance with established policies as contained in FM 101–5. Preparations for movement by water transportation must include necessary protective devices to prevent salt air or water damage to equipment, especially delicate communications and similar equipment.

c. While the ship is en route, it is controlled and operated by the shipping or Navy personnel. The unit being moved is responsible for the personnel and equipment being transported. As this type of transportation often consumes a relatively great amount of time, problems of troop morale and discipline may arise. The battalion commander is responsible for the safety and discipline of personnel, training as facilities permit, and the care of equipment while en route. Details on water movement are contained in FM 101–5 and applicable field manuals of the 55-series.

CHAPTER 11

TRAINING

11–1. General

The board training principles and policies to be used by all commanders are set forth in AR 350–1. Training in each unit and organization of the Army will be that training required for the effective performance of the mission. The battalion operations and training officer (S3) prepares the battalion training program and assists the commander in its implementation. Company commanders are responsible for training their companies in accordance with the battalion program. Although training is divided into several phases and categories, training in the battalion is a continuing process which moves from one phase to another without fixed starting or stopping points.

11–2. Training Publications

Army training programs (ATP) prescribe a general subject outline of training to be conducted by operational units and outline the minimum essential training for units and individuals. ATP also prescribe the subjects, the number of hours to be devoted to each subject, and essential study references and training aids which apply to the training of specific Army units. Smaller units, for which no ATP is available, may use applicable portions of ATP of larger units. Army subject schedules (ASubjScd) provide detailed guidance to instructors for the preparation of lesson plans and scheduling of periods of instruction for the conduct of training in a particular subject as outlined in ATP. FM 21–5 and FM 21–6 contain basic guidance for Army training. Other military publications available for training purposes are listed in DA Pam 310–3.

11–3. Individual Training

a. Individual training is that training which develops the skills and knowledge necessary to enable a soldier to participate as an effective member of a unit engaged in combat.

b. Individual training is provided in—

(1) Basic combat training centers.

(2) Advanced individual training centers.

(3) Army schools.

(4) Army units. This training, usually on-the-job training, is given in the unit when formal training in Army training centers and schools is not available. On-the-job training for the award of initial military occupational specialties (MOS) is presented only as a last resort. However, on-the-job training in the unit provides an invaluable method of developing and expanding skills in MOS obtained in Army schools and training centers. Maintenance personnel, for instance, can be given an opportunity to adapt their skills to the diversities of aviation maintenance in the operational environment provided by the aviation battalion and its elements. Officer and warrant officer personnel of the aviation battalion can maintain their aviator qualifications as well as their proficiency in both tactical and nontactical flying. Each individual officer must be competent to perform duties in aviation and in his career branch. Maintenance of this dual qualification demands the full energy and dedication of the individual. To this end, the officer must seek and take advantage of assignments and opportunities which contribute to his development as a professional Army officer. Information of the Army aviation officer career program is contained in AR 600–105.

11–4. Unit Training

a. Unit training stresses the consolidation of individual skills to achieve an effective unit capability. This training demonstrates the importance of the contribution made by each individual to the effectiveness of the unit. It is usually conducted in the field under conditions which the unit will be likely to encounter in combat.

b. Basic unit training is largely confined to company and smaller unit tactics. This training further develops all individual skills and adapts these skills to requirements of the unit.

c. Advanced unit training in the aviation battalion is usually conducted at the battalion level. It deals with the unit's tactical proficiency as demonstrated during training with supported units. Much of the advanced unit training should be conducted in bivouac under simulated tactical conditions. Particular attention will be given to—

(1) Dispersion.
(2) Concealment.
(3) Local security.
(4) CBR operations and protection measures.
(5) Individual and unit protective measures against nuclear weapons effects.
(6) Evasion and escape techniques for aircrew members.
(7) Formation flying.
(8) Night operations.

11–5. Field Exercises and Maneuvers

Field exercises make up the last phase of the formal Army training program (FM 105–5). ATP 20–5 outlines the Army training program for field exercises and maneuvers. This phase provides opportunity for brigades and larger units and supporting forces to exercise as a fully integrated combined arms team. Field exercises are conducted under similar war conditions in which troops and armament of one side are actually present, while those of the other side may be imaginary. In field maneuvers, troops and armament of both sides are present in whole or in part. In this training, the aviation battalion or its subordinate elements are employed in support of the various type units with which the battalion is expected to operate under tactical conditions. Field exercises and maneuvers reflect all functions performed by the unit and require maximum teamwork performed on a 24-hour basis. Exercises and maneuvers will include integrated CBR training in all phases commensurate with the training objective. They will include—

a. Performance of all normal mission capabilities.

b. Signal communications, including transmission security and alternate means of communication.

c. Liaison.

d. Intelligence stressing the accurate, prompt, and complete reporting of information.

e. Evasion and escape.

f. Individual and unit protective and defensive measures (active and passive), to include use of demolitions, camouflage and concealment, and airfield perimeter defense.

g. Unit action against air, airborne, and ground attack including means of combating guerrillas and infiltrators.

h. Route reconnaissance.

i. March discipline and convoy organization and regulation.

j. Organizational maintenance.

k. Bivouac procedures, including field messing and sanitation.

l. Emergency medical treatment for the sick and injured, and evacuation.

m. Supply procedures and leadership, cadre, and key specialist training.

n. An evaluation and critique aimed at the correction of all deficiencies noted during the exercises.

11–6. Operational Readiness Training

Operational readiness training is that training undertaken by units which have completed the formal phases of training and which are

assigned the responsibility for maintaining the highest possible state of combat proficiency in order to accomplish operational missions. This training employs a simulated plan of operation, of the same or greater complexity than an actual plan of operation, to provide exercises in unit response to operational orders. The objectives of operational readiness training are to—

a. Correct deficiencies discovered in previous training.

b. Develop and maintain, with all means available, a satisfactory state of readiness for operational missions to include special operations in various environments.

c. Prepare to deploy to the field for extended combat operations on short notice.

11–7. Training With Other Units

Training with other units provides training for the aviation battalion, or its elements, in the operational support role. During such training, supported units gain experience in utilizing and adapting to aviation support. Such integrated training is particularly suited to Army aviation units whose elements are usually decentralized and placed in support of other units. Training with host country units in airmobile operations is necessary for both the indigenous forces and the supporting aviation units.

11–8. Army Training Tests (ATT)

Army training tests provide guidance for testing to evaluate the ability of a unit to perform its assigned mission, and to evaluate the ability of the soldier to perform the minimum skills requisite to success in battle. After completion of an ATP, an ATT is administered to determine the extent to which the ATP was effective. Each ATT is related directly to an ATP or to a portion of an ATP.

PART THREE

AVIATION GROUP, AIRMOBILE DIVISION

CHAPTER 12

INTRODUCTION

12–1. General

The aviation group (TOE 1–100T) is a tactical support unit designed to provide combat and combat service support, airlift of personnel and materiel, aerial observation and surveillance, and general aviation support required by the airmobile division. The group is capable of accepting additional aviation attachments from corps or army sources.

12–2. Mission

The mission of the aviation group is to provide aviation support for the airmobile division. The group also provides aviation special staff personnel for the airmobile division headquarters.

12–3. Composition

The composition of the aviation group, airmobile division, is shown in figure 12–1.

12–4. Major Elements

Major elements of the aviation group are as follows:

a. Headquarters and Headquarters Company. The headquarters and headquarters company provides aviation special staff personnel for the airmobile division headquarters, command and staff support for the aviation group, and pathfinder and terminal approach support for subordinate and attached units. Chapter 15 shows the organization of this company.

b. General Support Aviation Company. The general support aviation company provides light observation and utility helicopters to support divisional units which do not possess organic aircraft. It also provides medium observation aircraft for electronic, photo, and visual reconnaissance. See chapter 16 for the organization of the company.

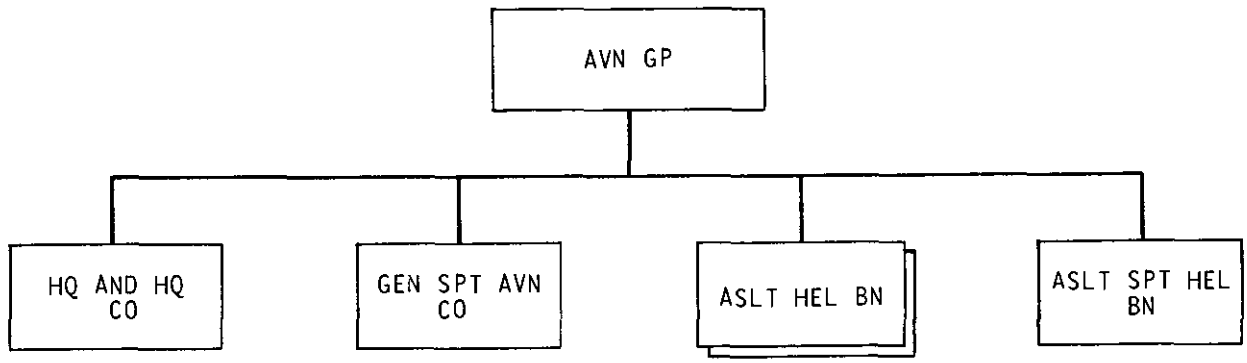


Figure 12–1. Aviation group, airmobile division.

c. Assault Helicopter Battalions. Airlift of brigade tactical elements is provided by the two assault helicopter battalions. Each battalion has three lift companies and one aerial weapons company (chap 17).

d. Assualt Support Helicopter Battalion. The assault support helicopter battalion contains three aircraft companies which primarily provide airlift for the movement or artillery, engineers, infantry battalion logistical elements, and some supplies, but which can be used to airlift infantry assault forces (chap 18).

12–5. Coordination

a. Aviation Group Commander. The group commander also serves as the division aviation officer. In addition to commanding activities of the aviation group, he exercises special staff supervision of nonorganic Army aviation elements attached to or supporting the division.

b. Assistant Division Aviation Officer. The assistant division aviation officer is located at the division tactical operation center (DTOC) where he represents the division aviation officer (aviation group commander) as a special staff officer with the division aviation element. As the division aviation officer's representative on the division staff, the assistant division aviation officer is the primary coordinating agency for the allocation of the division's aviation resources.

c. Aviation Group Headquarters. The aviation group headquarters performs normal headquarters functions and provides detailed information for inclusion in the aviation annex of all division orders. It prepares the group aviation orders for employment of subordinate, orangic, and attached units.

12–6. Capabilities and Limitations

a. Capabilities. At full strength and under conditions of optimum utilization of manpower and materiel (AR 310–31), the aviation group can—

(1) Perform staff planning for, supervise, and provide command and control of subordinate and attached units.

(2) Provide aviation personnel to serve as members of the division special staff.

(3) Provide continuous (day and night) operations during visual weather conditions and limited operations under instrument weather conditions in support of the division in the forward areas of the combat zone within the division area of influence.

(4) Provide limited aerial battlefield surveillance to acquire information regarding the enemy and terrain, and to perform target acquisition.

(5) Perform simultaneous airlift of the assault elements of two airmobile infantry battalions and one of the division's 105mm field artillery battalions.

(6) Provide armed aerial escort in support of airmobile operations.

(7) Provide aircraft to support the division headquarters, the support command, and other units of the division not possessing organic aircraft for command control, liaison, and reconnaissance, to include radiological survey.

(8) Provide aircraft for airlift of supplies, equipment, and divisional troop units.

(9) Provide electronic landing assistance to aircraft at base airfields during instrument flying weather.

(10) Provide pathfinders to assist in airmobile operations.

(11) Provide aircraft as required to supplement patient air evacuation missions.

b. Limitations. The aviation group has the following limitations:

(1) The operational capabilities of the group are reduced by adverse weather conditions.

(2) The group has limited ground vehicular mobility.

(3) The group has a requirement for local air superiority, and requires assistance in the suppression of enemy ground-to-air fires.

(4) Organic security must be augmented by other troops to enable continuous operations.

(5) The group requires large amounts of POL.

CHAPTER 13

COMMAND AND STAFF

13–1. Aviation Group Commander

a. As one of the principal commanders of the division, the aviation group commander reports to and operates directly under the division commander. He exercises command over the aviation group and all elements assigned or attached to the group. In exercising this command, he is assisted by the group staff.

b. The aviation group commander is assigned the additional duty of division aviation officer. In this capacity, he is responsible for informing and advising the division commander and staff on matters concerning the employment of elements of the group, other divisional aviation units, and nondivisional Army aviation elements supporting the division. He also—

(1) Maintains liaison with higher, lower, and equivalent unit headquarters.

(2) Prepares and supervises the aviation group portion of the division training program, and monitors aviation training for other units of the division through his division aviation staff.

(3) Supervises the establishment and operation of the division air traffic control and regulation system, and the division base airfields.

(4) Prepares aviation portions of division estimates, plans, orders, and reports.

(5) Prepares the aviation portion of the air movement plan for airmobile operations.

c. The aviation group commander (division aviation officer) is represented by the assistant division aviation officer (ADAO), located at the DTOC, as the special staff officer with the division aviation element. Duties performed by the ADAO are outlined in paragraph 4–3.

13–2. Aviation Group Staff

The aviation group staff is responsible to the group commander for acquiring information; making recommendations; preparing estimates, plans, and orders; and coordinating all operations of the group. The group staff normally is organized as discussed below, or as otherwise designated by the group commander. FM 101–5 contains details of staff officer functions, and chapter 4 of this manual outlines the duties and responsibilities of members of the aviation battalion staff.

a. Unit Staff. The unit staff is composed of the executive officer, adjutant, intelligence officer, operations and training officer, logistics officer, and sergeant major. Staff functions normally are performed under the supervision of the executive officer.

b. Special Staff. The special staff is composed of technical specialists and heads of services who advise and report directly to the group commander on group-wide activities. The surgeon, aviation maintenance officer, aviation safety officer, chaplain, signal officer, chemical officer, and the pathfinder platoon commander normally are designated as members of the special staff.

13–3. Liaison

To provide effective and timely aviation support to the division, the aviation group must maintain liaison with the major units of the division. Figure 13–1 indicates the necessary liaison between the various elements of the division and the aviation group.

a. An aviation group liaison officer or team habitually is attached to each infantry brigade of the division. The liaison officer is the aviation group commander's personal representa-

RECEIVING HEADQUARTERS	SENDING HEADQUARTERS			
	AVN GP	ASLT HEL BN/CO	ASLT SPT HEL BN/CO	PFDR DET
BRIGADE HQ	A	B	B	
INF/CAV BN/SQDN HQ		B		
INF/CAV CO/TRP HQ		B		
SUPPORT COMMAND (FSE)			B	
DIVISION ARTY			B	
ENGINEER		B	B	
ASLT HEL BN/CO				A
ASLT SPT HEL BN/CO				A

A--INDICATES HABITUAL LIAISON.

B--INDICATES LIAISON WHEN UNIT IS IN SUPPORT FOR OPERATIONS.

NOTE: ADAO PROVIDES LIAISON BETWEEN THE DIVISION AND AVIATION GROUP. LIAISON BETWEEN GEN SPT AVN CO AND AVN GP IS PROVIDED BY THE OP OFF AND AVN GP S3.

Figure 13-1. Aviation group liaison support requirements.

tive to the brigade commander and staff, and is immediately responsive to the group commander. When an assault helicopter battalion is placed in support of an infantry brigade, the battalion commander becomes the brigade commander's principal advisor on the employment of the helicopter battalion. When the majority of the aviation group's assets are placed in support of a brigade, the group commander and his staff become the principal advisors and coordinators for the employment of the group.

b. The aviation group also maintains liaison with other major units of the division through unit liaison officers assigned from the aviation group. These liaison officers serve as advisors to the supported commanders on aviation matters and maintain direct communication between the supported units and the supporting aviation elements.

CHAPTER 14

OPERATIONS AND AIRSPACE UTILIZATION

Section I. OPERATIONS

14–1. General

The aviation group is employed in general support of the airmobile division. Missions are received from division headquarters and specific requirements are placed on the group's subordinate units by the group headquarters. Aviation elements are usually placed in direct support of committed infantry brigades and division artillery. In addition, other elements of the aviation group remain in general support, providing support on a mission basis under the operational control of the aviation group headquarters. A schematic diagram depicting this capability is shown in figure 14–1.

14–2. Aviation Group

a. Units of the aviation group operate from dispersed locations within the division base when in general support, and from within the brigade base when employed in direct support of committed infantry brigades in forward areas. Regardless of location, all group units remain highly mobile in order to rapidly transfer support elements between brigades and other divisional units.

b. General aviation support procedures are basically the same in supported infantry and artillery units whether they are in the offense, defense, or other type of operation. These procedures are implemented by communications links between supported unit and supporting aviation unit commanders, either through personal command contact or liaison teams. Exacting coordination is required to insure that the tactical mission is accomplished rapidly and efficiently.

c. Aviation units supporting an airmobile brigade task force obtain POL resupply from the combat service support elements located within the brigade base. This is a direct, coordinated relationship with the brigade forward support element and normally does not involve the brigade. Other aircraft of the aviation group obtain POL resupply from the division base. Well forcasted and timely delivery of POL and other supplies to proper locations is essential for effective operations. The aviation group headquarters monitors this logistical effort to insure adequate support.

14–3. Aviation Group Headquarters

The group staff coordinates directly with the division staff in the development of plans for the tactical employment of aviation assets of the aviation group. Based upon the recommendations of the aviation group commander (division) (aviation officer), the units of the group are employed by the division to meet the tactical needs of the infantry brigade and supporting units. The group headquarters issues orders, assigns missions to, and coordinates with its subordinate elements concerning aviation support for other elements of the division.

14–4. General Support Aviation Company

The general support aviation company operates from an instrumented airfield within the division base. Normally, elements of the utility and support platoon supporting the division and group headquarters operate from, or within close proximity to, the division main heliport and receive missions from the aviation group headquarters operations section. The remaining elements of these platoons operate from the base airfield in general support of divisional units without organic aircraft, providing support on a mission type basis. The sur-

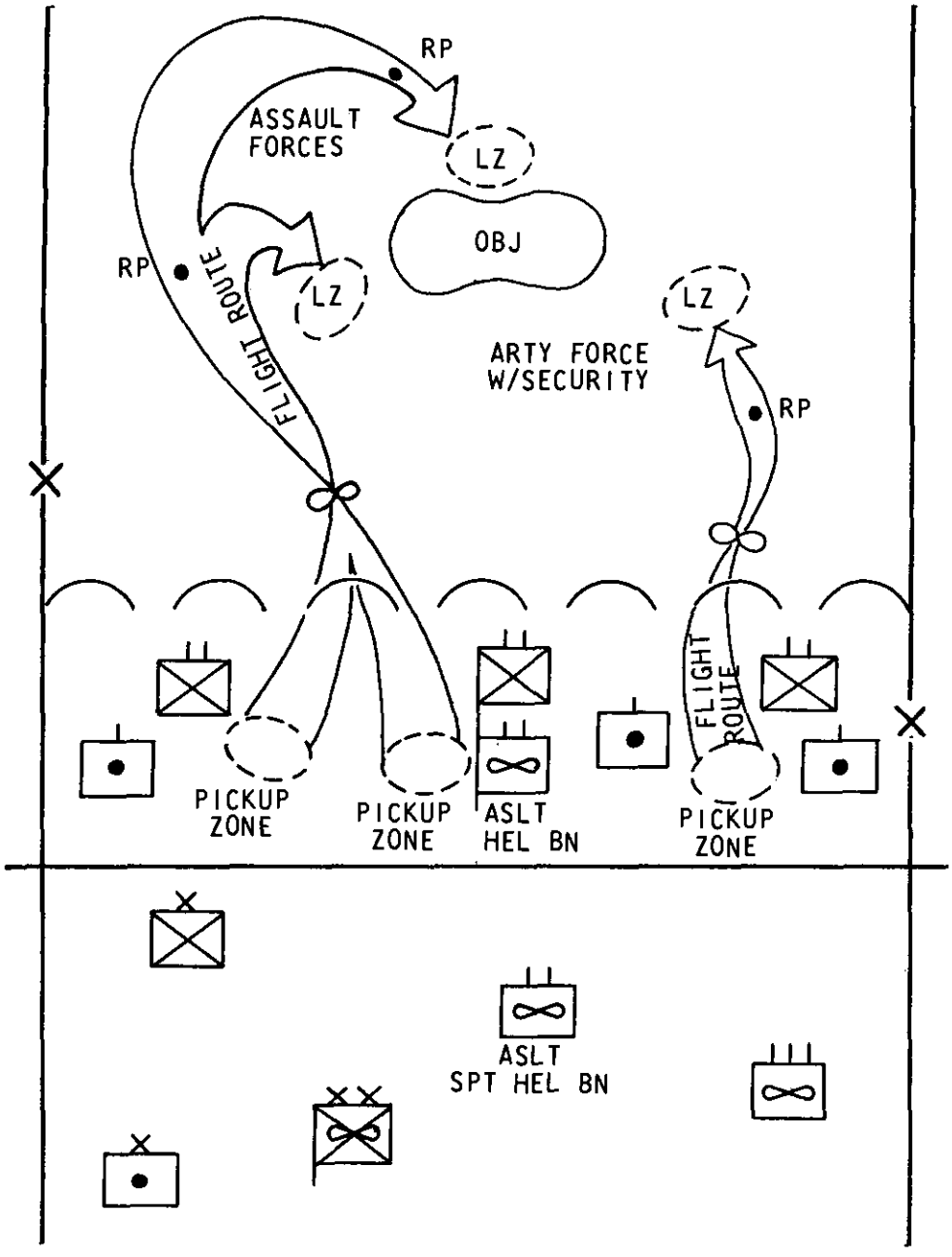


Figure 14-1. Type airmobile deployment.

veillance platoon provides sustained, near all-weather, day or night surveillance from the instrumented airfield in general support of the division. Specific missions, day or night, normally are categorized as surveillance or reconnaissance. These missions are performed under the operational control of the G2. Any given mission may employ visual observation and/or one or more of the sensors (IR, SLAR, and photo) organic to the OV-1 aircraft. During a specific mission, an aviator observer team may change to another type mission or may per-

form both types concurrently when directed through command channels.

14-5. Assault Helicopter Battalion

The assualt helicopter battalions normally operate in the forward areas from dispersed locations within the brigade base of the supported unit. The battalion maintains a high degree of mobility. Effective support is faciliated by continuous coordination between infantry and aviation commanders, by frequent personal visits, and through liaison officers. The tactical integrity of the assault helicopter battalion is maintained whenever possible; however, one assault helicopter battalion can be augmented by companies from the other assault helicopter battalion for larger scale operations. Normally, this is for short periods of time and support is maintained from the parent unit. Operations are characterized by rapid movement and support of troops about the battlefield, achieving tactical gains from increased mobility.

14-6. Assault Support Helicopter Battalion

The assault support helicopter battalion normally operates from the division base in general support of the division. During operations in forward areas, involving an assault support helicopter battalion in direct support of a brigade or division artillery unit, a battalion forward CP may be established to provide more effective command and control. Units employed in direct support of committed brigades for extended periods usually operate from a base established within the brigade area. When involved in airmobile operations with an assault helicopter battalion, coordination with both the supported unit and the assault helicopter battalion is necessary.

Section II. AIRSPACE UTILIZATION

14-7. General

Requirements for airspace utilization and coordination for the airmobile division are essentially the same as for any other Army division. The airmobile division operates under the same rules and regulations as those applicable to other divisions and is supported by corps air traffic control units. These units control all airspace up to the division base area and assist in the control of aircraft within the division area, but the division is responsible for its own air traffic regulation. Division aviation element personnel prepare the division airspace control plan.

14-8. Joint Aspects

Joint doctrine, principles, and responsibilities for use of airspace within the area of operations apply in their entirety to the airmobile division. Due to the large number of Army aircraft in this division and the anticipated frequent use of U.S. Air Force support, airspace coordination is an important requirement. USAF support planning is the responsibility of the division G3, but the aviation group is kept informed to insure that USAF support is coordinated with the planned employment of Army aviation.

14-9. Control in Forward Areas

The division airspace control plan is prepared by the division aviation element. The aviation group liaison officer assigned to a committed brigade assists in preparing the brigade plan. This plan is provided to the air defense element (ADE), or to the G3, for incorporation into the division airspace utilization plan. Air routes are planned and coordinated with all fire support units. The following factors are considered in planning airspace use:

a. Standing operating procedures.

b. Pilot adherence to appropriate techniques and procedures.

c. Visual reference between aircraft.

d. Knowledge of planned operations of all air elements involved.

e. En route advisories by ground-to-air and air-to-air communications from agencies, a flight operations center (FOC), flight coordination center (FCC), tactical operation center (TOC), and USAF tactical air command (TAC).

f. Use of pathfinders to or in the objective area.

g. Command control procedures.

h. Air defense identification requirements and rules.

CHAPTER 15

HEADQUARTERS AND HEADQUARTERS COMPANY

15-1. General

a. Mission. The mission of the headquarters and headquarters company, aviation group, airmobile division (TOE 1-101T) is to furnish command, control, communications, and supply for the aviation group and to provide aviation special staff personnel for the airmobile division headquarters.

b. Capabilities. At full strength, the headquarters and headquarters company can—

(1) Provide command and control, perform staff planning, and furnish communications and supervision of operations of subordinate units of the aviation group and attached units.

(2) Provide aviation special staff personnel for the aviation group headquarters, division aviation officer's section, and the Army aviation element of the DTOC.

(3) Provide personnel to supervise supply, maintenance, and administration for organic and attached units.

(4) Provide pathfinder support to the elements of the division.

(5) Provide GCA teams for the division.

c. Limitations. The unit has the following limitations:

(1) It is dependent upon the division administration company for personnel administration.

(2) It is dependent upon the headquarters and headquarters company, airmobile division, for medical service.

d. Composition. The composition of the group headquarters and headquarters company is shown in figure 15-1.

15-2. Group Headquarters

The functions of aviation group headquarters are discussed in chapter 14.

15-3. Company Headquarters

a. Mission. The company headquarters provides administrative services for the group headquarters, and headquarters company to include mess, supply, quarters, communications, and maintenance of some administrative records.

b. Employment. The company headquarters is located near the aviation group CP where it performs administrative functions in support of the group headquarters and headquarters company.

c. Key Personnel. The headquarters company commander is responsible for displacing and reestablishing the group CP. He supervises administrative services such as mess, supply, and quarters for personnel of the headquarters and headquarters company and attached elements. The company commander also plans and supervises measures for security of the CP, maintains liaison with the group's unit and special staff officers, and, assisted by the first sergeant, supervises the activities of enlisted personnel assigned to his company.

15-4. Group Operations and Intelligence Section

a. Mission. The group operations and intelligence section provides personnel to operate the aviation group S2 and S3 sections.

b. Employment. Requirements of the section are to—

(1) Plan future operations.

(2) Recommend assignments of missions to subordinate units.

(3) Process mission requests.

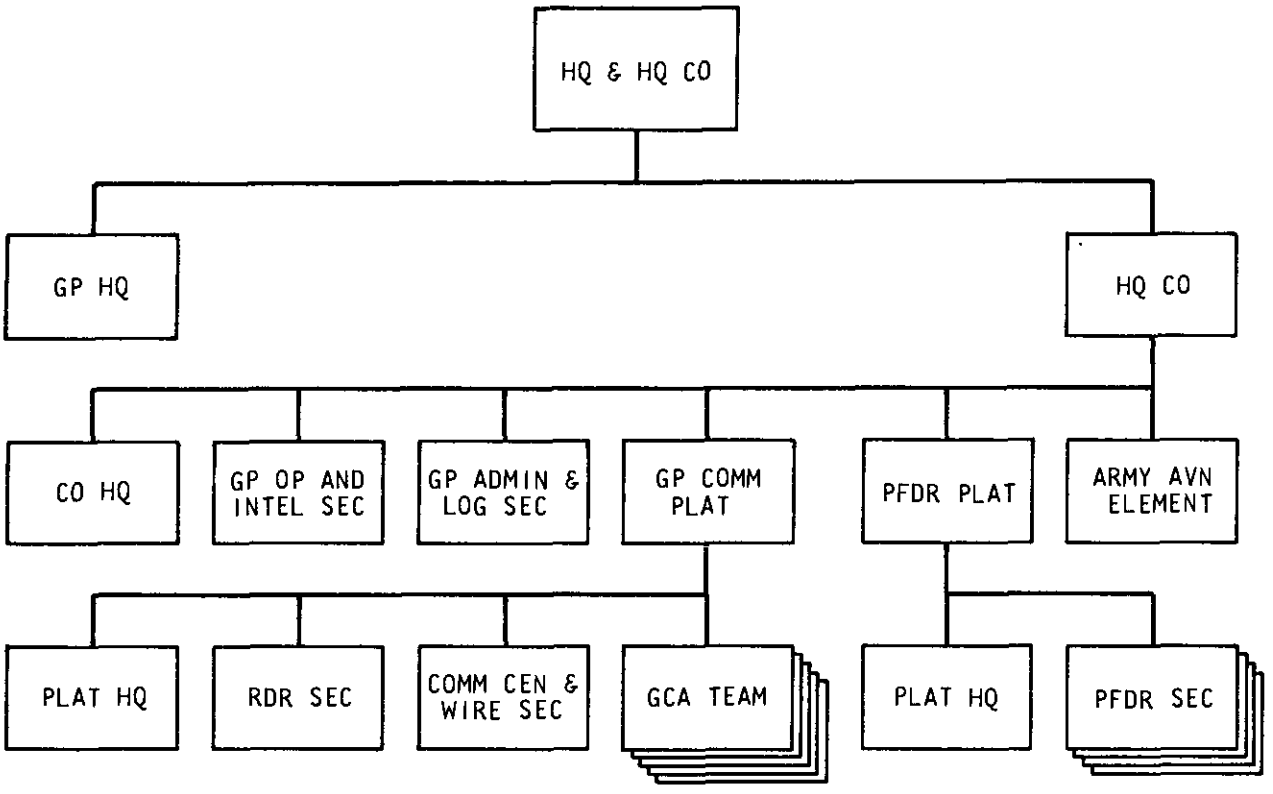


Figure 15–1. Headquarters and headquarters company, aviation group, airmobile division.

(4) Furnish transportation to the group commander, executive officer, and S3.
(5) Coordinate with division and supported units.
(6) Recommend the aviation organization for combat.
(7) Monitor immediate support requests.
(8) Provide personnel for the division aviation special staff and the Army aviation element.

c. Key Personnel. The operations plans officer and the operations officer are the principal assistants to the S2 and S3, respectively. Sufficient personnel to provide a 24-hour capability are assigned to the section.

15–5. Group Administration and Logistical Section

a. Mission. The administration and logistical section provides administrative and logistical services for the aviation group headquarters and headquarters company. This includes mess, supply, quarters, and the maintenance of administrative records. The section also provides personnel to assist in the group S1 and S4 sections.

b. Employment. The administration and logistical section is located at group headquarters. It monitors all administrative and logistical requests originating from within the group to higher or adjacent units.

c. Key Personnel. The administrative officer assists the S1 in all personnel and administrative matters. The motor maintenance officer is responsible to the group S4 in all matters pertaining to motor maintenance. The food advisor is responsible for the staff supervision of field ration mess operations within the group and provides assistance in accordance with TM 10–401. The aviation maintenance supervisor

is the principal enlisted assistant to the aviation maintenance officer. He supervises aircraft technical inspectors and coordinates the aircraft maintenance activities and requirements of attached or assigned units. The avionics supervisor is the principal enlisted assistant to the aviation maintenance officer for avionics matters.

15–6. Pathfinder Platoon

a. Mission. The mission of the pathfinder platoon is to provide navigational assistance to Army aircraft through operation of en route navigation, airlanding, or air delivery facilities on or over friendly, enemy threatened, or enemy dominated areas.

b. Employment. Pathfinder detachments are made available to aviation units by arrangements with the aviation group S3. Capabilities of the platoon (FM 57–38) include the following:

(1) Infiltration of an objective by any land, sea or air means.

(2) Indicating with electronic and visual navigation aids the desired direction and route of movement for aircraft and the identity of selected points on the terrain; the identity and location of low-level extraction and airlanded delivery areas; emergency ground-to-air signals; direction and points of landing for aircraft and the presence of obstacles to aircraft operations.

(3) Furnishings to aviators and commanders information on delivery areas to include the enemy and friendly situation, terrain and weather conditions, and results of chemical agent detection tests and radiological survey.

(4) Selecting, operating, and making limited improvements to landing zones.

(5) Assisting in training infantry and other divisional units in aircraft loading procedures for airmobile operations as required.

c. Key Personnel. The platoon commander and the platoon sergeant operate the platoon headquarters. Each of the four pathfinder sections is assigned a section commander and an assistant section commander. A section sergeant and an assistant section sergeant supervise the activities of the pathfinders assigned to each section.

15–7. Army Aviation Element

a. Mission. The mission of the Army aviation element is to function as a special staff section in the division headquarters. This special staff section assists the division aviation officer by furnishing information and planning on matters relating to aviation.

b. Employment. The element is located at DTOC where it performs its functions under the supervision of the assistant division aviation officer.

c. Key Personnel. An operations officer, an operations sergeant, flight operations personnel, and a clerk typist are assigned to the element. The operations officer is the principal assistant to the assistant division aviation officer. The element assists in the coordination of aviation matters in the DTOC. During tactical operations, he has the additional duty of division airspace officer.

15–8. Group Communications Platoon

a. Mission. The communications platoon establishes, operates, and maintains the communications system for the aviation group headquarters. It coordinates and directs the communications activities of subordinate units operating in the group communications nets. The GCA teams provide the necessary personnel and equipment to control terminal landing control facilities within the airmobile division area of operations.

b. Aviation Group Nets. Figures 15–2 and 15–3 depict type radio and wire nets for the aviation group.

c. Employment. The group communications platoon headquarters is located at group headquarters. The radio section and the communications center and wire section install and operate the equipment necessary to provide

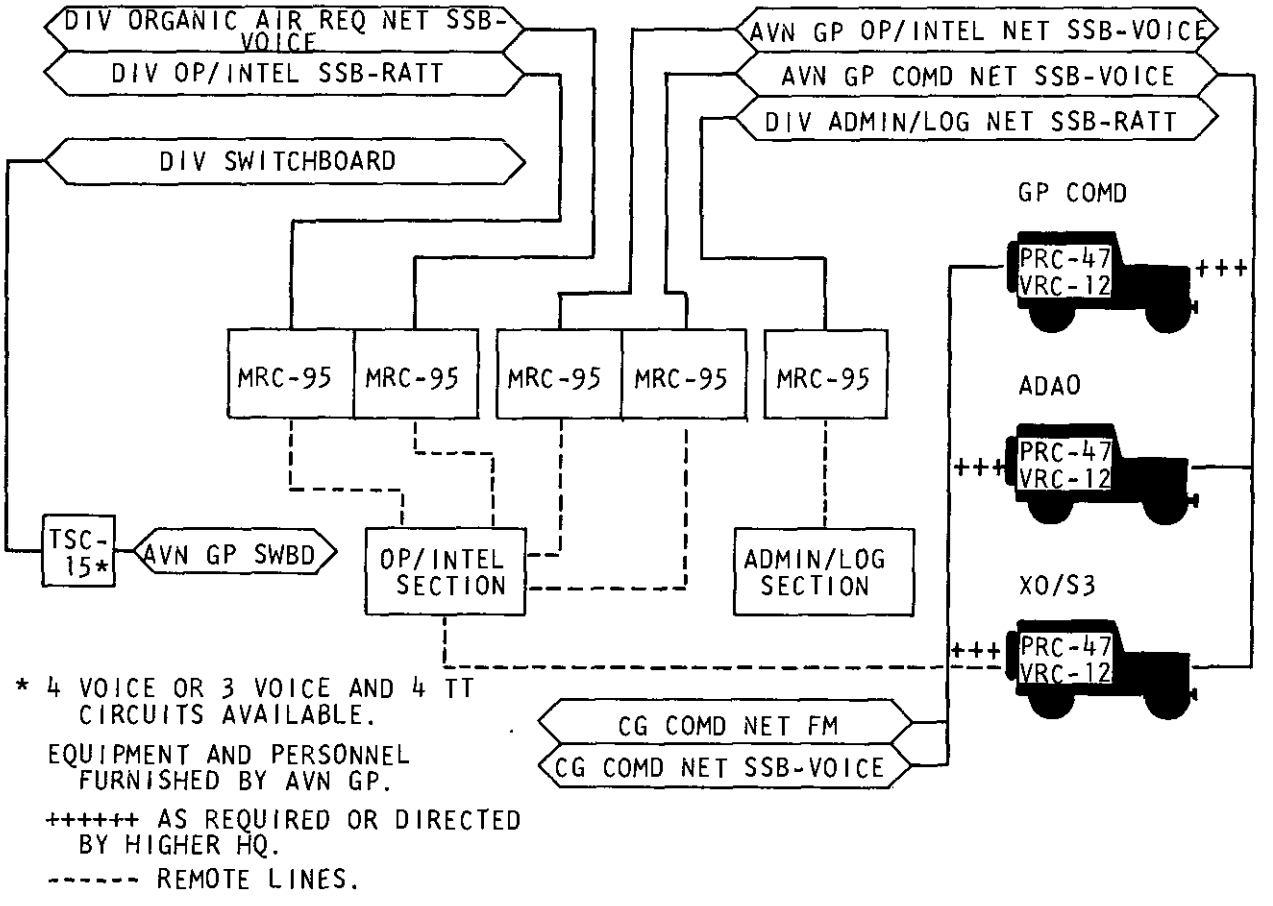
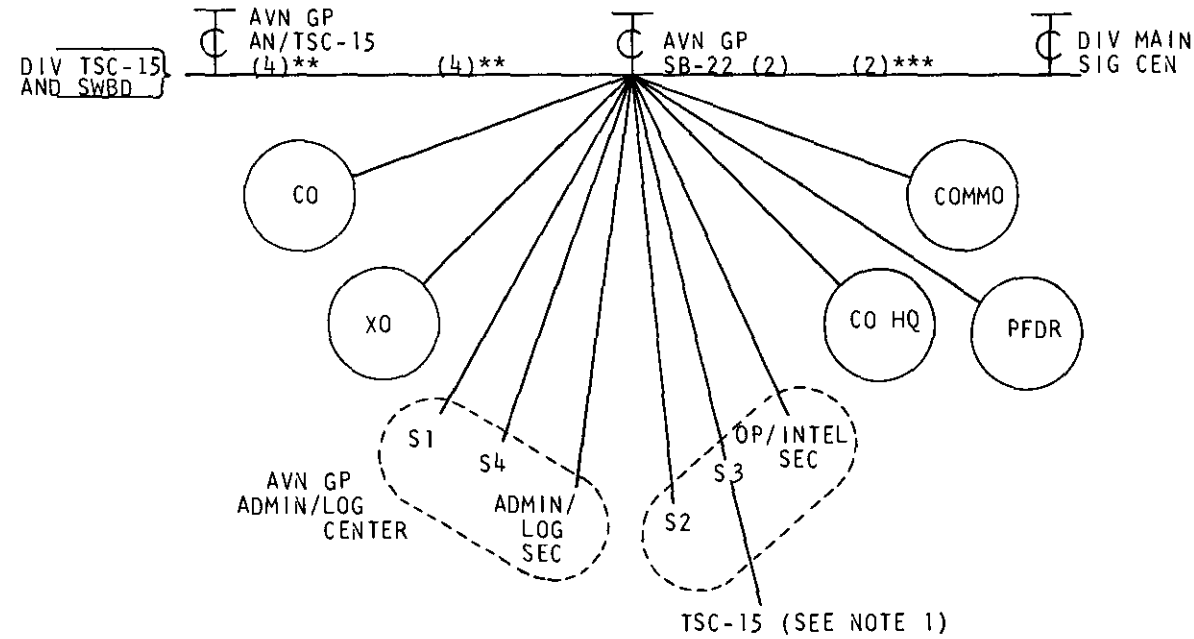


Figure 15–2. Aviation group type radio net.



* OTHER UNITS THROUGH DIV SWBD.

** MAY BE 3-VOICE AND 4-RATT OR OTHER COMBINATIONS.

*** INSTALLED BY DIV SIG BN.

NOTE 1: ONE VOICE LINE FROM TSC-15 IS SOLE-USER LINE TO OP/INTEL. SIMILARLY AT DTOC ONE LINE IS SOLE-USER TO THE AAE. THIS PROVIDES IMMEDIATE COMMUNICATIONS BETWEEN AAE AND GP. WHEN TSC-15 IS NOT USABLE, ONE LINE FROM DIV MAIN SIG CEN IS USED FOR THIS PURPOSE.

Figure 15–3. Aviation group type wire net.

radio and wire communications nets used by the aviation group. The GCA teams are employed under staff supervision of the group S3.

d. Key Personnel. The platoon leader of the group communications platoon headquarters, assisted by the communications chief, supervises the operations of the platoon. The platoon leader assists the signal officer in planning, operating, and maintaining the group communications system. The radio section chief supervises the activities of personnel of the radio section, and the section chief of the communications center and wire section supervises the activities of personnel assigned to his section.

CHAPTER 16

GENERAL SUPPORT AVIATION COMPANY

16–1. General

a. Mission. The mission of the general support aviation company, aviation group, airmobile division (TOE 1–102T) is to provide aviation support for the division headquarters, aviation group headquarters, support command, and other units of the division without organic aircraft. The unit will provide sustained, near all-weather, day or night surveillance and acquire combat intelligence and target information for the airmobile division.

b. Capabilities. At full strength, the general support aviation company can—

(1) Provide aerial observation, reconnaissance, and surveillance of enemy areas by visual, radar, infrared, and photographic means for the purpose of locating, verifying, and evaluating targets, conducting terrain study, and providing fire adjustment.

(2) Provide day and night operations during visual weather conditions and limited operations under instrument weather conditions.

(3) Provide aircraft for aerial command post, control, liaison, reconnaissance, and radio relay for the division.

(4) Provide aircraft as required to supplement patient air evacuation missions.

(5) Provide aerial photography consisting of daylight vertical, oblique, and panoramic photography.

(6) Provide limited battlefield illumination and local smoke screens for combat elements of the division.

(7) Provide aircraft for radiological survey missions.

c. Limitations. Limitations of the general support aviation company include the following:

(1) Those limitations, such as sensitivity to adverse weather conditions and requirements for aircraft POL and maintenance, which are common to all operations involving use of aircraft.

(2) The unit is dependent upon the division administration company for personnel administration, and upon the headquarters and headquarters company of the airmobile division for medical support. It is dependent upon the military intelligence detachment attached to the airmobile division for exploitation of the acquisition capability of the aerial surveillance platoon.

d. Composition. The composition of the general support aviation company is shown in figure 16–1.

e. Planning and Coordination. The company comander initiates and maintains close liaison with the aviation group S3 to insure that coordination and implementation have been accomplished. The surveillance platoon leader, acting for the company commander, coordinates directly with the division G2 air for all missions. The company is responsible for operating two airfields, an instrumented fixed wing airfield in the division rear, and a division base heliport in close proximity to the division main CP. The location of the heliport is coordinated with the aviation group S3 to insure that it meets division requirements. Patient movement missions assigned to the unit are initiated by the division medical battalion and transmitted through the aviation group S3 to the general

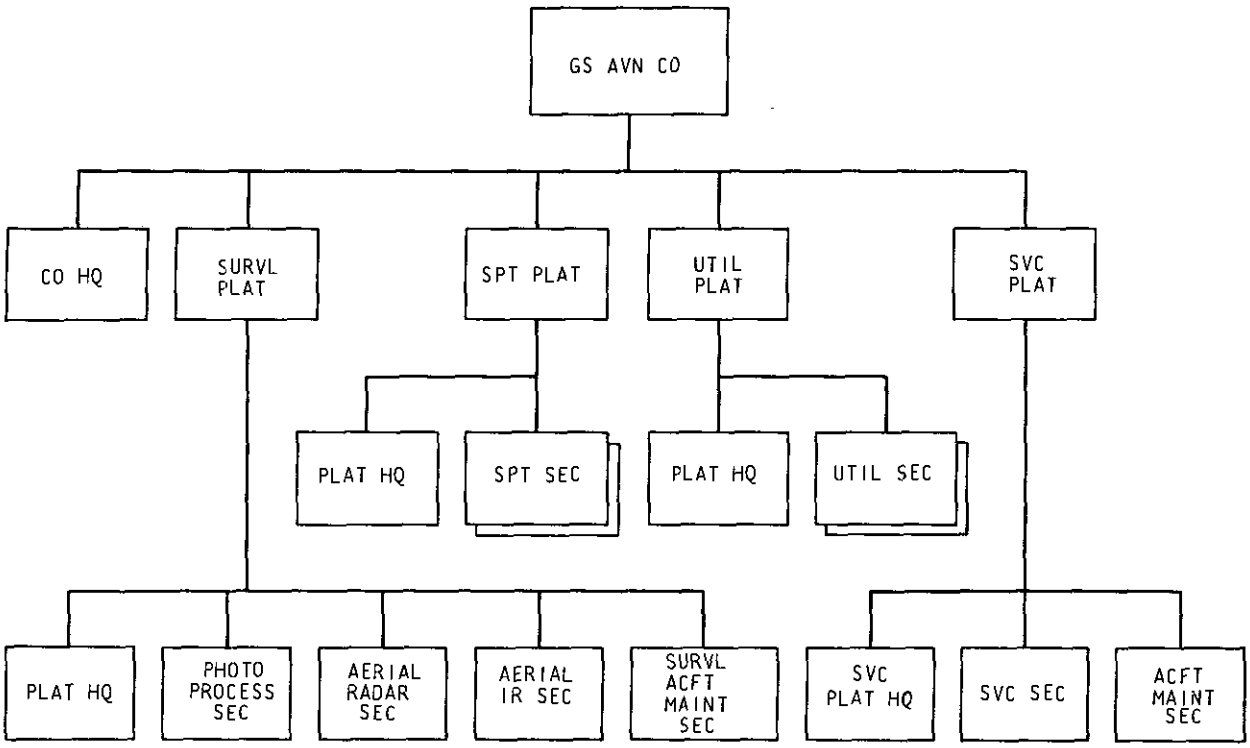


Figure 16-1. General support aviation company, aviation group, airmobile division (TOE 1-102T).

support aviation company. Litters can be installed in unit aircraft for this purpose.

f. Employment. The general support aviation company operates from two locations within the division base area. The main elements, to include the company headquarters and the surveillance, utility, and service platoons, are employed in general support of the division and operate from an instrumented, fixed wing airfield. The company also operates and maintains the division base heliport from which helicopters are employed to support the division commander and his immediate staff. These helicopters are retained at the division main heliport, but are maintained from the company's main airfield. This heliport has a day and night capability, but normally is not instrumented. When the division employs a forward TOC, the company establishes a supporting heliport with a visual flight rules (VFR) capability. The surveillance platoon operates from the division base airfield and is employed in general support of the division through the operational control of the assistant chief of staff G2. Requests from divisional units for radar, infrared, and/or photographic missions are combined at division and programed to the surveillance platoon. Operations from brigade base areas are not anticipated because aircraft operating from the division base area can provide adequate support to the brigades. Helicopters of the company normally are employed on a mission type basis within priorities established by the general support aviation company commander and the S3 of the aviation group. Aircraft assigned on a continuous support basis are identified in the division or aviation group order. Aircraft not committed, and those due maintenance, are retained at the company's base airfield.

16-2. Company Headquarters

a. Mission. The mission of the company headquarters is to provide command, control, and

administration for organic elements of the company; to supervise flight operations, training, and supply actions; and to maintain all communications equipment for the company and provide personnel to operate the communications base heliport.

b. Employment. The company commander coordinates with the division aviation officer and the aviation group staff, particularly the S3, in developing plans for the employment of the company.

c. Key Personnel. The company commander advises the group S3 of the daily status of the company, with particular emphasis on his forecast of aircraft availability for the near future. He is responsible for providing a planned number of flyable aircraft on a daily basis, consistent with unit missions and required maintenance schedule. The flight operations officer assists in coordinating and planning company missions and operations, to include aviator training.

16–3. Surveillance Platoon

a. Mission. The mission of the surveillance platoon is to provide aerial surveillance to acquire combat intelligence and target acquisition information for the airmobile division. (App E, FM 1–5, contains a detailed discussion of the operations of the surveillance platoon.)

b. Employment. The surveillance platoon, with its aerial radar and infrared sections, is employed from the instrumented airfields in the division base area. This location is desirable to minimize the effect of adverse weather conditions on platoon operations and to reduce to a minimum the time required to deliver acquired information and imagery to the user. The platoon is capable of operations in direct support of tactical units of the division, but is most effectively employed on a single aircraft mission type basis in general support of the division. The ground sensor terminals, which receive and portray the telemetered infrared and radar imagery from surveillance aircraft, normally are monitored by G2 representatives at the airfield.

c. Key Personnel. The platoon commander is responsible for the command, control, and operation of the platoon. He keeps the company commander informed on the operational status of the platoon and advises him on platoon employment. He coordinates all activities with the division G2 and keeps him informed of any changes in his capabilities.

16–4. Support Platoon

a. Mission. The support platoon provides aviation support for units of the division that do not possess organic aircraft. The aircraft are furnished on a mission basis, utilizing light observation helicopters. This support will include reconnaissance missions, radiological surveys, special courier service, and command transport service.

b. Employment. The support platoon is located adjacent to the general support aviation company headquarters and the company flight operations in the division base area. Elements of the platoon are employed in execution of the company mission on a mission type basis within the capabilities of the assigned aircraft and personnel. The aircraft of the platoon are equipped with dismountable, offensive-fire weapons kits for limited employment to augment other aerial weapons organic to the division.

c. Key Personnel. The support platoon commander and the platoon sergeant operate the support platoon headquarters. Each of the support sections is authorized a section leader —an aviator—who supervises the activities of the other aviators and crew chiefs assigned to his section.

16–5. Utility Platoon

a. Mission. The mission of the utility platoon is to provide aviation support to the division commander and his staff, and to units of the division which do not possess organic aircraft on a mission type basis; to provide limited aerial movement of combat supplies, equipment, replacements, or units for the division command element; and to provide aircraft, on a limited basis, to supplement air evacuation missions.

b. Employment. The utility platoon is located adjacent to company flight operations at the division base airfield, and the employment of the platoon is similar to that of the support platoon, including the aerial weapons capability. The significant difference is the utilization of the greater lift capacity of the utility platoon's aircraft and their instrument flight capability.

c. Key Personnel. The utility platoon commander and the platoon sergeant operate the utility platoon headquarters. Each of the two utility sections is authorized a section leader—an aviator—who supervises the activities of the other aviators and the crew chiefs assigned to his section.

16-6. Service Platoon

a. Mission. The mission of the service platoon is to perform organizational maintenance on aircraft, ground vehicles, aircraft weapons systems, small arms, and communications and avionics equipment assigned to the general support aviation company; and to provide refueling services for the company and for other aircraft, as required, at the division's main heliport and the company's fixed wing airfield.

b. Employment. The service platoon is located in close proximity to the general support aviation company headquarters. In addition to maintaining and servicing organic aircraft, this platoon provides emergency maintenance and servicing to aircraft arriving at the division base heliport.

c. Key Personnel. The service platoon commander and the platoon sergeant operate the service platoon headquarters. The section leader of the service section—a warrant officer—supervises the activities of personnel assigned to his section. The helicopter maintenance technician—a warrant officer—supervises the activities of personnel assigned to the aircraft maintenance section.

CHAPTER 17

ASSAULT HELICOPTER BATTALION

Section I. INTRODUCTION

17–1. General

a. Mission. The mission of the assault helicopter battalion, aviation group, airmobile division (TOE 1–155T) is to provide tactical mobility for combat troops, supplies, and equipment of the division during the conduct of combat and airmobile operations.

b. Capabilities. At full strength, and under conditions of optimum utilization of manpower and equipment, the battalion can—

(1) Provide continuous (day and night) operations during visual and marginal weather conditions and limited operations under instrument weather conditions in support of the division in the forward areas of the combat zone.

(2) Based on 80 percent availability, provide airlift for the assault elements of one infantry battalion in a single lift.

(3) Provide aircraft as required to supplement patient air evacuation missions.

(4) Provide armed aerial escort for airmobile operations within the combat zone.

(5) Provide routine logistical support for deployed infantry units, emergency resupply, night illumination, and dispersal of chemical agents.

(6) Provide limited combat service support.

c. Limitations. The limitations of the battalion are those common to units conducting operations primarily through use of aircraft.

(1) The unit is dependent upon the aviation group for instrument approach facilities.

(2) Other limitations as listed in paragraph 12–6*b*.

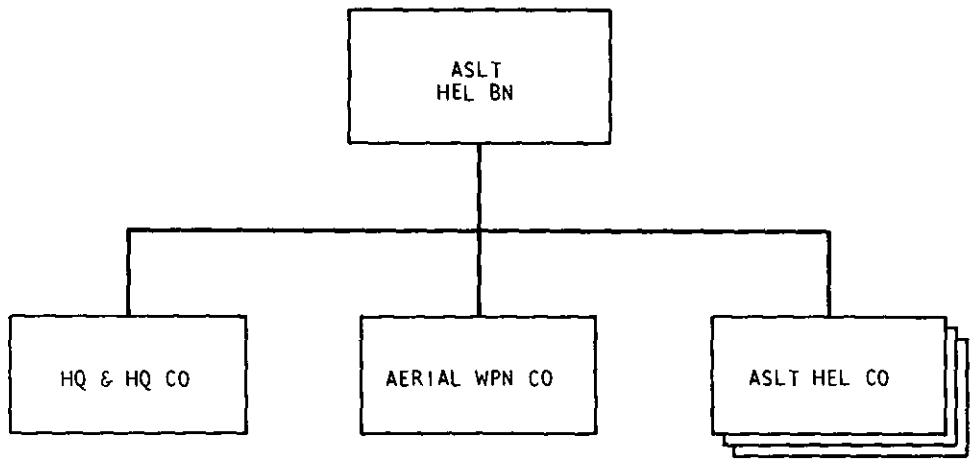


Figure 17–1. Assault helicopter battalion, aviation group, airmobile division (TOE 1–155T).

d. Composition. The composition of the assault helicopter battalion is shown in figure 17–1.

e. Planning and Coordination. Planning and coordination factors relating to the assault helicopter battalion include the following:

(1) The planning and coordination necessary for the support of mission requirements will vary according to the mission and the mission plan of the supported unit. The battalion commander must keep abreast of the tactical situation and maintain his unit in a state of readiness to meet any requirements placed upon him. This is accomplished through close and continuous coordination with the aviation group and the supported unit for a well planned operation. Well developed SOP and reliable communications are absolutely necessary for coordination and planning. Although airlift operations are standardized to the maximum possible extent, the following factors must be considered for each specific operation:

(*a*) Mission and tactical plan of the supported unit, including the fire support plan.
(*b*) Tactical situations.
(*c*) Pilot and aircraft availability.
(*d*) Enemy situation and capabilities.
(*e*) Terrain and weather.
(*f*) Combat support availability.
(*g*) Combat service support.
(*h*) Air defense support available.
(*i*) Availability and suitability of aviation support from other sources, to include USAF and Navy.

17–2. Employment

The assault helicopter battalion is never kept in reserve. Normal employment is for one battalion to be placed in direct support of each committed brigade. By the allocation of more airlift companies, a battalion can be tailored to fit a specific mission; for a large scale operation, one battalion can be employed to reinforce another battalion. A battalion also may be augmented by another type element such as a pathfinder detachment. Other factors regarding employment of the assault helicopter battalion include the following:

a. The assault helicopter battalion is employed as a primary means of maneuvering troops on the battlefield. The assault helicopter company may support the infantry battalion, infantry companies, or the air cavalry squadron. Tactical missions are determined under the conditions outlined in paragraph 8–2. Aerial rocket artillery and, on occasion, air cavalry may provide fire support for the assault helicopter battalion during a specified period. The assault helicopter battalion normally will operate in support of an infantry brigade and its lift companies in support of infantry battalions. The aerial weapons helicopters normally are employed as armed escort for the lift elements of a battalion, as well as placing suppressive fires on the landing zone during the landing of troops.

b. When the battalion is assigned a mission, the commander takes immediate steps to establish communications and liaison with the units to be supported. The battalion commander personally visits with the supported units and employs his unit staff, liaison officer, and company commanders to keep abreast of the situation and requirements of the supported units, and to insure thorough planning and adequate coordination of aviation support.

c. The assault helicopter battalion commander acts as staff advisor and frequently accompanies the infantry battalion commander or staff on reconnaissance. When other aviation elements, such as assault support helicopters and aerial rocket artillery, are supporting an airmobile operation, their flight activities are coordinated with the assault helicopter battalion. The commander of any group aviation unit is responsible for maintaining liaison with the group liaison officer at brigade.

d. Because of the rapid mobility inherent in the airmobile division, the operations of the assault helicopter battalion are characterized by use of fragmentary and mission type orders

from higher headquarters and to the subordinate companies of the battalion.

e. Employment of the assault helicopter battalion in airmobile operations permits the ground force commander to take advantage of the helicopters' speed and maneuverability to accomplish a wide variety of tasks. The assault helicopter battalion provides the ground commander with capabilities to include the following:

(1) Pose a threat which may cause the enemy to divert combat forces to maintain a strong posture in rear areas.
(2) Overcome distances and bypass barriers in enemy defenses.
(3) Extend the area over which he can exert his influence.
(4) Deploy his forces more effectively by having highly mobile forces in reserve.
(5) Gain favorable tactical mobility over enemy combat forces.

f. Types of operations in which the assault helicopter battalion can be effectively employed include the following:

(1) Offensive.
(2) Counterattacks.
(3) Reinforcement.
(4) Retrograde, to include withdrawal and retirement.
(5) Delaying actions.
(6) Relief.
(7) Feints and demonstrations.
(8) Raids.
(9 Antiairborne and counterguerrilla operations.
(10) Eagle flights (the immediate reaction force).

g. The assault helicopter battalion can be effectively employed in night tactical operations. In night operations, the helicopter is less vulnerable to enemy ground and air fires, and the enemy has greater difficulty in determining the location of the main landing area. Diversionary techniques in landing of forces are extremely effective during hours of darkness and poor visibility. However, night operations require greater training, place more stress on the identification of landing areas, and also impose difficulties in navigation. Whenever possible, pathfinders are used in landing zones to assist landing control of traffic and movement of troops at night. Flares can be used to illuminate night landing operations.

Section II. HEADQUARTERS AND HEADQUARTERS COMPANY

17–3. General

a. Mission. The mission of the headquarters and headquarters company (TOE 1–156T), assault helicopter battalion, is to provide tactical command, control, staff planning, and supervision for the assault helicopter battalion.

b. Employment. The headquarters and headquarters company is a self-contained unit, capable of independent operation and organized to provide personnel and equipment for tactical command, control, and administrative functions for assigned and attached units. It is usually located with one of the assault helicopter companies. The company consists of the battalion headquarters and the headquarters company. The headquarters company contains the battalion headquarters section, battalion medical section, and the battalion maintenance and supply section.

17–4. Battalion Headquarters

a. Mission. The mission of the battalion headquarters is to provide tactical command, control, and administrative supervision of assigned and attached units.

b. Employment. The battalion headquarters normally is employed as a single unit, but its organization is sufficiently flexible to allow the staff to be split for operation at more than one location. It is staffed and equipped to function as a tactical command and control headquarters. Aircraft support for command and control is provided by the company headquarters. The command group maintains continuous com-

munications with the command post to insure timely exchange of essential information. The battalion commander is the aviation advisor to the supported brigade commander for his unit.

c. Key Personnel. The battalion commander exercises command and control of his battalion and attached units. Other personnel assigned to the battalion headquarters are the executive officer, members of the unit staff and the special staff, and the sergeant major. The duties and responsibilities of staff officers are outlined in chapter 4 of this manual and in FM 101-5.

17-5. Company Headquarters

a. Mission. The company headquarters provides administrative services for the battalion headquarters and headquarters company. These services pertain to individual requirements of assigned personnel to include mess, supply, quarters, supervision of nonduty activities, and the maintenance of some administrative records.

b. Employment. The company headquarters is located near the battalion CP. It is a housekeeping element and normally operates from one location, but can operate from two locations. In displacements, the headquarters company commander is responsible for locating and securing the elements of the battalion CP and the headquarters company elements in the new position. Organizational maintenance of ground vehicles of the headquarters is performed by the mechanics of this section.

c. Key Personnel. Key personnel of the company headquarters are the company commander, first sergeant, supply sergeant, mess steward, motor sergeant, crew chiefs, aircraft armorer, and sufficient personnel to perform the administrative, mess, and supply functions and to transport the unit mess.

17-6. Battalion Headquarters Section

Personnel of the battalion headquarters section assist the battalion commander and staff members assigned to battalion headquarters. Although there is some flexibility in the assignment of personnel, depending on the commander's policies and the day-to-day changes in requirements, personnel of the section normally are employed as follows:

a. The flight operations officer acts as assistant to the battalion S3 and supervises the activities of the operations sergeant, assistant operations sergeant, chemical NCO, draftsman, and the flight operations specialist.

b. The airfield control personnel work under supervision of the S3 and/or the signal officer.

c. The personnel staff NCO and the mail delivery clerk assist the S1.

d. The clerk typists and the radio telephone operators provide general support to personnel operating in battalion headquarters.

17-7. Battalion Communications Section

The battalion signal officer supervises the activities of personnel assigned to the battalion communications section. The section consists of the communications chief and sufficient radio teletype operators, switchboard operators, wiremen, and repair personnel to provide the battalion headquarters with the required communications operational capability. Organizational maintenance of the battalion's ground FM radios is performed by this section. Figure 17-2 depicts an assault helicopter battalion radio net.

17-8. Battalion Medical Section

The battalion medical section operates under the supervision of the battalion surgeon. The section consists of the section sergeant and sufficient medical specialists to provide the battalion and subordinate units with required medical support. Generally there will be one senior medical aidman with each assault helicopter company and two medical aidmen with the aerial weapons company.

17-9. Battalion Maintenance and Supply Section

This section consists of the aviation maintenance officer, automotive maintenance technician, unit supply technician, and sufficient enlisted assistants to provide staff planning and supervision of the supply and maintenance functions, both ground and air, of the battalion.

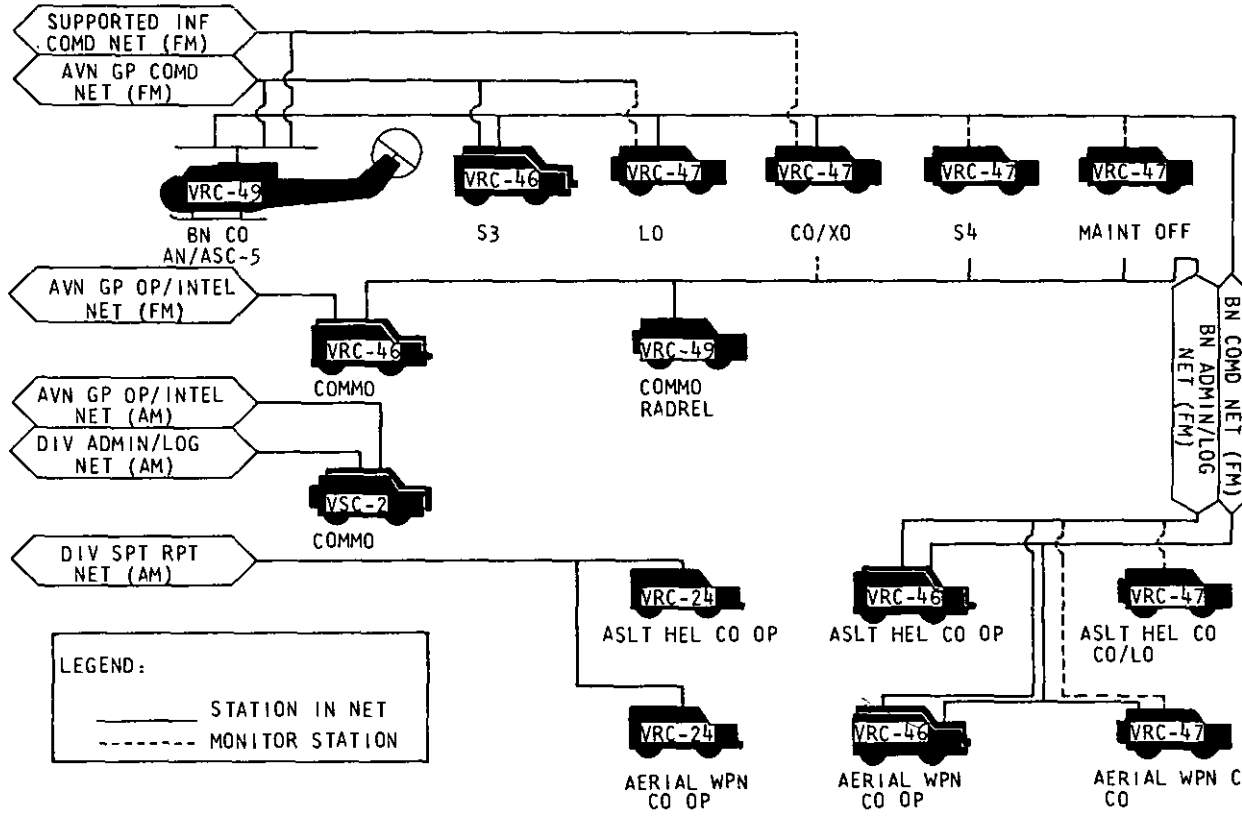


Figure 17–2. Type assault helicopter battalion radio net.

This section acts as the point of contact for attached or supporting maintenance elements. No aircraft maintenance is performed by the section. Vehicular organizational maintenance is performed for the subordinate units and the headquarters company. Repair parts, transportation aircraft parts, ammunition, and fuel are supplied to subordinate companies directly from the supply points and not through this section.

Section III. AERIAL WEAPONS COMPANY

17–10. General

a. Mission. The mission of the aerial weapons company (TOE 1–157T) is to provide security for airmobile forces and to participate in offensive, defensive, and delaying actions as part of a highly mobile combined arms team.

b. Employment. The aerial weapons company is a self-contained unit, capable of independent operation, and habitually operates from its own dispersal or assembly area. The company normally is employed to support the assault helicopter companies in the conduct of airmobile operations. It is organized and equipped to operate as a unit, but frequently is employed in platoons or sections. Sections can operate independently with support by their parent or supported unit. The aerial weapons teams escort the assault helicopters and destroy or neutralize sources of ground fire directed at escorted helicopters en route to the objective areas. They also supply suppressive fire as needed during the landings, loadings, and takeoffs of the airlift helicopters in the objective

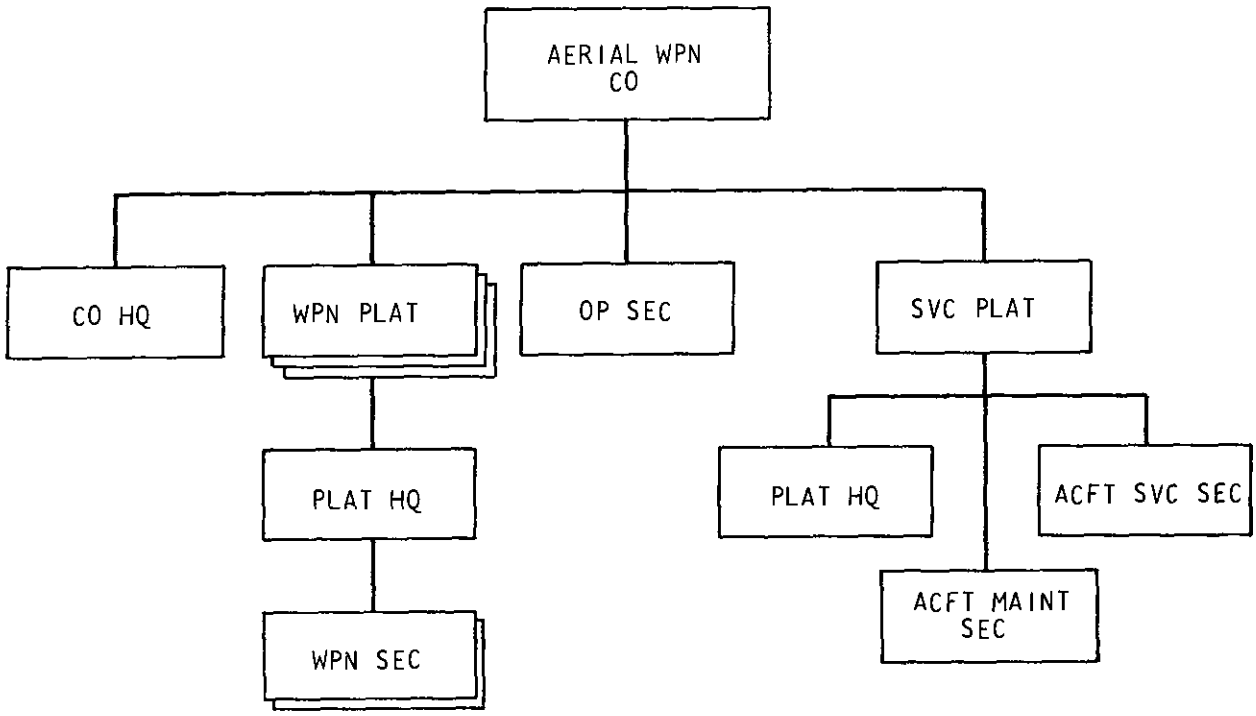


Figure 17–3. Aerial weapons company.

areas. Fires of the aerial weapons company normally are not included in the fire support plan. The unit requires no prepared airfields or landing sites. Aerial weapons systems may be integrated into the unit ground defense plan (FM 1–110). Composition of the aerial weapons company is shown in figure 17–3.

17–11. Company Headquarters

a. Mission. The mission of the company headquarters is to provide command, control, and administrative supervision of organic and attached units.

b. Employment. The company headquarters is centrally located in relation to the aerial weapons platoons, and normally is located adjacent to the headquarters company.

c. Key Personnel. The company headquarters contains the company commander, executive officer, first sergeant, and sufficient personnel to perform the administrative, mess, and supply functions required by the company.

17–12. Flight Operations Section

The flight operations section consists of an operations officer, flight operations chief, communications chief, and sufficient enlisted specialists to establish and operate the company heliport and to assist the company headquarters in operational control and administrative supervision of the company.

17–13. Weapons Platoons

Each of the three weapons platoons consists of a platoon headquarters and two weapons sections. The mission of a weapons platoon is to destroy enemy forces by application of aerially delivered area rocket and machinegun fire. A platoon normally will be placed under operational control, or in direct support, of another unit and will require combat service support from the supported unit. When not engaged in a direct support role, the platoon will establish a platoon area close to the company command post and service elements, and

will receive administrative support from its parent unit.

17–14. Service Platoon

The service platoon of the aerial weapons company consists of the service platoon headquarters, aircraft maintenance section, and the aircraft service section. The platoon provides organizational maintenance and services required for the aerial weapons company's aircraft, vehicles, weapons, and avionics equipment. The service platoon headquarters normally is collocated with the company headquarters. Elements of the aircraft service section may be attached to the weapons platoons when those platoons are operating independently, or from locations which would preclude adequate servicing from the platoon headquarters area.

Section IV. ASSAULT HELICOPTER COMPANY

17–15. General

a. Mission. The mission of the assault helicopter company (TOE 1–158T) is to provide tactical mobility for combat troops, supplies, and equipment of the division during airmobile operations. Composition of the company is shown in figure 17–4.

b. Employment. The assault helicopter company is organized and equipped to provide airlift for maneuvering infantry troops on the battlefield. Three companies are authorized for each of the two assault helicopter battalions organic to the aviation group. The company normally is employed in support of the division in forward areas of the combat zone to airlift units making main or supporting attacks. For this purpose, the company is usually placed in direct support or under operational control of the unit to be supported. Aircraft of the aerial weapons company may be attached to provide

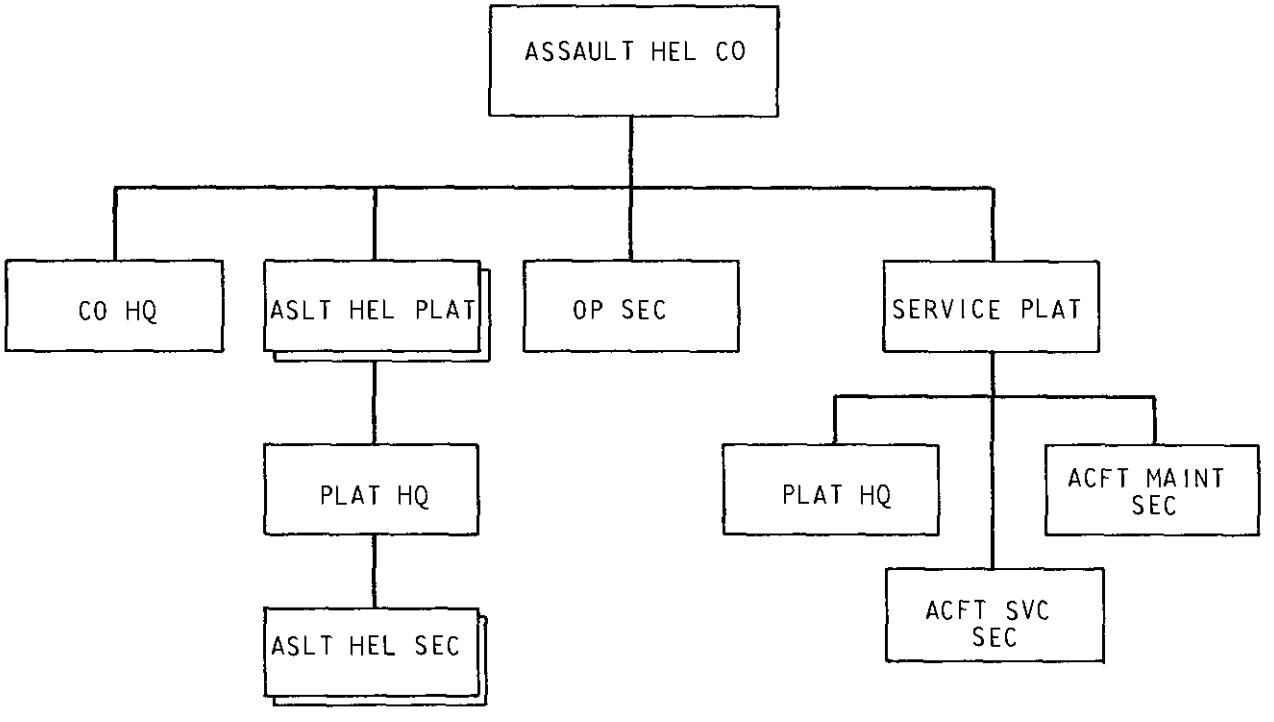


Figure 17–4. Assault helicopter company.

fire support to assault helicopters en route to or landing troops in objective areas.

c. Key Personnel. The company headquarters contains the company commander, executive officer, first sergeant, and sufficient personnel to perform the administrative, mess, and supply functions of the company.

17-16. Flight Operations Section

The flight operations section contains a flight operations officer, flight operations chief, and sufficient personnel to plan and control all flight operations of the company to include visual air traffic control. The section's communications personnel install and operate the internal wire net and a nondirectional radio beacon and maintain the ground radio equipment.

17-17. Assault Helicopter Platoons

Each of the two assault helicopter platoons consists of an assault helicopter platoon headquarters and two assault helicopter sections. The platoon commander performs the additional duty of liaison officer during platoon size operations. Missions are received from the flight operations section or, when temporarily detached from the company, the supported unit. (Where gunners are required, they should be provided from sources outside the aviation units.) A pilot, copilot, and crew chief are provided for each helicopter. The company is usually employed on company missions under the control of the company commander, but may be employed as a separate platoon on a mission basis only. The platoon is not self-sustaining and must rely on the company for administration and logistics.

17-18. Service Platoon

The service platoon contains a platoon headquarters, aircraft maintenance section, and an aircraft service section; the platoon is located near the company heliport. It provides organizational maintenance and services required for company aircraft to include aircraft armament, vehicles, and avionics equipment and provides POL services to aircraft assigned to the company.

CHAPTER 18

ASSAULT SUPPORT HELICOPTER BATTALION

Section I. INTRODUCTION

18–1. General

a. Mission. The mission of the assault support helicopter battalion, aviation group, airmobile division (TOE 1–165T) is to provide tactical air movement of combat troops, supplies, and equipment in airmobile operations within the combat zone.

b. Capabilities. At full strength, *and under conditions of optimum utilization of manpower and equipment,* the battalion can—

(1) Provide continuous (day and night) operations during visual weather conditions and limited operations under instrument weather conditions.

(2) Assuming 60 percent availability of medium transport helicopters, provide, in a single lift, air movement for the assault elements of one infantry battalion, one 105 mm howitzer battery, 116 tons of cargo, or any combination thereof.

(3) Provide aircraft as required to supplement patient air evacuation missions.

c. Limitations. The limitations of the battalion are those limitations common to units conducting operations primarily by use of aircraft (para 17–1*c*).

d. Composition. The composition of the assault support helicopter battalion is shown in figure 18–1.

e. Planning and Coordination. Operations of the assault support helicopter battalion are characterized by maximum use of fragmentary and mission type orders from higher headquarters to the battalion and from battalion headquarters to the companies. Unit operation requires rapid reaction, well developed SOP,

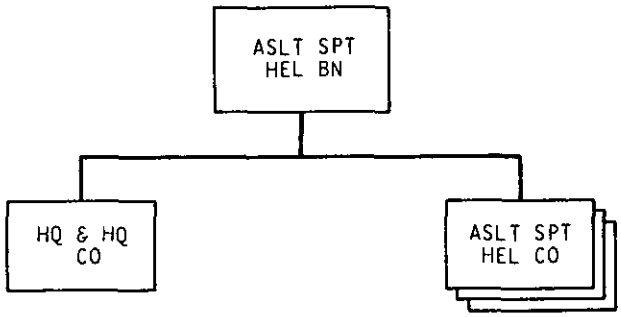


Figure 18–1. Assault support helicopter battalion, airmobile division (TOE 1–165T).

and reliable communications. The minimum planning time available during tactical phases is balanced by a continuing need for detailed planning prior to entering the operational area. Mission planning includes consideration of the following variable factors:

(1) Type of support to be provided by the aviation element.

(2) Anticipated duration of support.

(3) Determination as to whether the battalion will displace control elements forward to support operations or remain within the division base.

(4) General situation intelligence briefing, followed by detailed briefing on the specific area of operations.

(5) Available navigation aids within the area of operation.

(6) Communications procedures—

(*a*) Between aircraft.

(*b*) With the supported tactical unit.

(*c*) Between battalion and companies.

(*d*) With battalion rear CP, if operating forward.

(*e*) Between battalion and aviation group on both command nets and operations/intelligence nets.

(*f*) Maintenance of communications during displacement.

(7) Coordination with Army air defense.

(8) Coordination with assault helicopter units and surveillance and escort units employed in the area of operations.

(9) Coordination with division support elements on the location of class IIIA supply forward support elements, and estimated class IIIA requirements to support sustained operations.

(10) Anticipated need for pathfinders to support terminal guidance.

18-2. Employment

The assault support helicopter battalion habitually operates in general support of the division, and one or more of its subordinate units may be placed in direct support of a brigade. In addition to performing its assigned mission, the battalion is employed as the primary means of moving the artillery and combat engineer equipment on the battlefield. The battalion can be employed effectively at night, but may require pathfinder support or illumination to identify landing zones. Types of operations in which the battalion may be gainfully employed include the—

a. Transport of combat support forces in offensive operations.

b. Transport of airmobile assault forces in exploitation operations.

c. Airlift of reserves.

d. Transport of combat and combat support forces in defensive actions.

e. Transport of supplies to forces in forward areas.

f. Installation of hasty minefields.

18-3. Operations

a. The following sequence of actions typifies the move from the assembly area to mission completion. Upon receipt of a mission, a liaison officer is sent to the supported unit. After exchanging pertinent information with the liaison officer, the airmobile force commander completes his plans and issues his orders which in turn are received by the assault support helicopter battalion commander. The battalion staff then formulates the unit operations order and delivers it verbally to subordinate units. This permits maximum planning time to brief all personnel involved in the operation. Prior to departure, all aircraft personnel and equipment are checked; refueling sites are selected and coordinated with the support command; the pickup and landing zones are determined, supporting fires are requested or on-call, the unit is organized for movement, and terminal guidance support is established. In the pickup and landing zones, parking and refuel points as required are established to facilitate the overall operation.

b. Final coordination between primary commanders normally is completed in the pickup zone prior to mission execution. Alternate plans are made; allowances programed for landings, takeoffs, and refueling; and plans made for resupply. Mission orders are executed on schedule with a demonstration of rapid loading, sequenced flight over planned routes, rapid discharge of personnel, and equipment mission ready. A sample airmobile task force commander's checklist appears in appendix G.

Section II. HEADQUARTERS AND HEADQUARTERS COMPANY

18-4. Mission

The mission of the headquarters and headquarters company, assault support helicopter battalion (TOE 1-166T), is to furnish command, control, staff planning, and supervision for the assault support helicopter battalion.

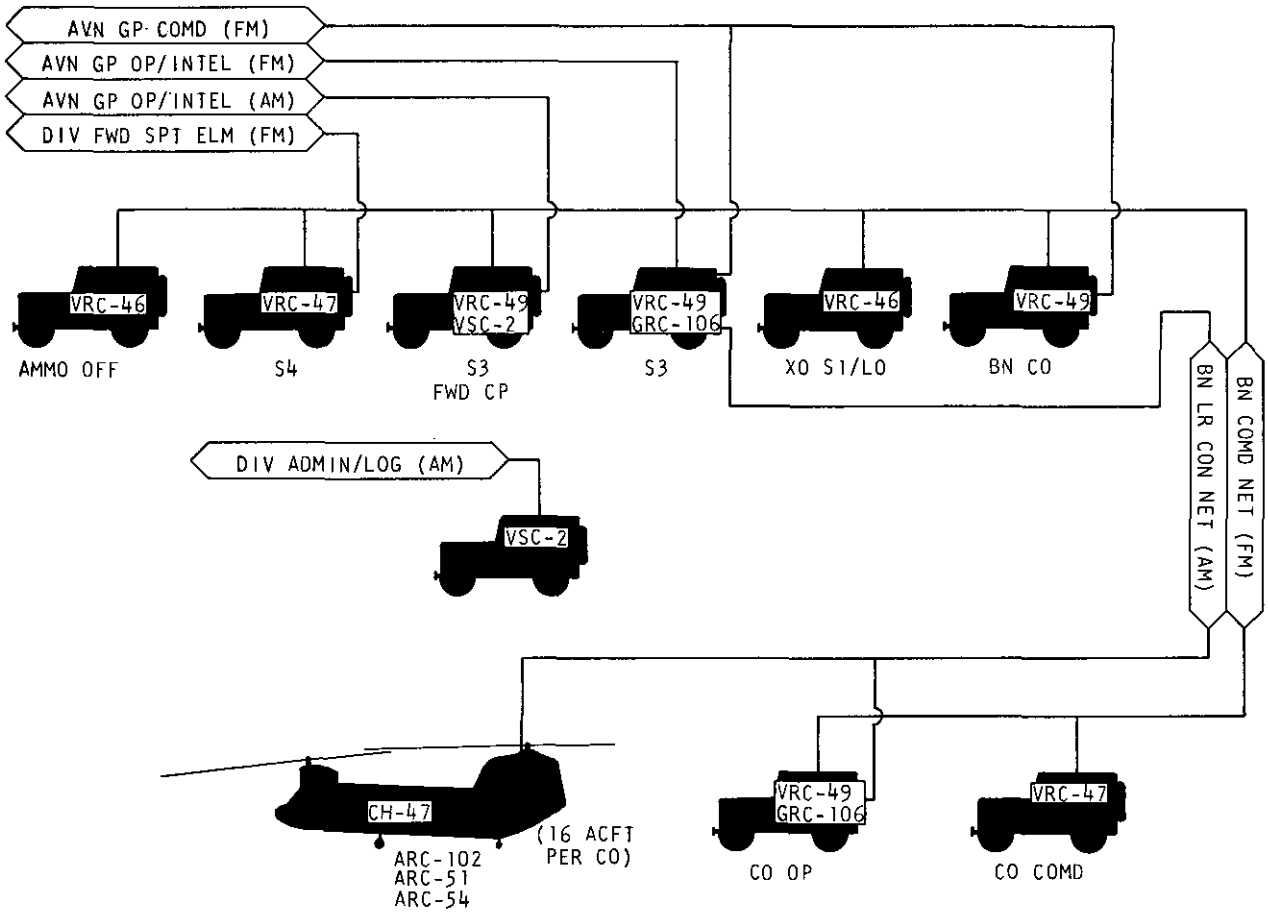


Figure 18–2. Type communications radio net, assault support helicopter battalion.

18–5. Organization and Function

The headquarters and headquarters company, assault support helicopter battalion, is practically identical in organization and function to the headquarters and headquarters company, assault helicopter battalion. The type radio communications net utilized by the assault support helicopter battalion is shown in figure 18–2.

Section III. ASSAULT SUPPORT HELICOPTER COMPANY

18–6. General

a. Mission. The mission of the assault support helicopter company, assault support helicopter battalion (TOE 1–167T), is to provide tactical mobility for combat troops, supplies, and equipment of the division during the conduct of combat and airmobile operations.

b. Employment. Three assault support helicopter companies are authorized for the battalion (fig. 18–3). Each company is a self-contained unit, capable of independent operation, and habitually operates from its own dispersal or assembly area. All authorized items of equipment, except fuel trucks, are air transportable by use of organic helicopters. The com-

pany disperses by platoon or section within the assembly area and displaces by echelon. Telephone is the normal means of communications among all elements of the company when on the ground. Single side band high frequency voice radio is used for communications with higher headquarters, flight operations center, liaison officers, supported units, and distant in-flight elements of the battalion. FM and UHF voice radio provides communications with relatively near in-flight elements. The company is employed in support of the division, normally in forward areas of the combat zone. Although it can be fragmented into platoon size units, the company is most effective when employed as a single unit. The company usually is placed in direct support or under the operational control of the supported unit on a mission support basis, but can be attached to a supported unit for operations covering an extended period of time.

c. Key Personnel. The company headquarters consists of the company commander, first sergeant, armorer, and sufficient personnel to perform the administrative, mess, and supply functions required by the company.

18–7. Flight Operations Section

The flight operations section contains the flight operations officer, flight operations chief, communications chief, and other necessary personnel to perform the company's required operations and communications functions. When operating in a combat theater, crews must be supplemented with additional gunners to man M–24 armament subsystems which provide a suppressive fire capability.

18–8. Assault Support Helicopter Platoon

Each of the two assault support helicopter platoons contains a platoon headquarters and two assault support helicopter sections. The platoon commander is assisted by the platoon sergeant in exercising command and control of the platoon and performs the additional duty

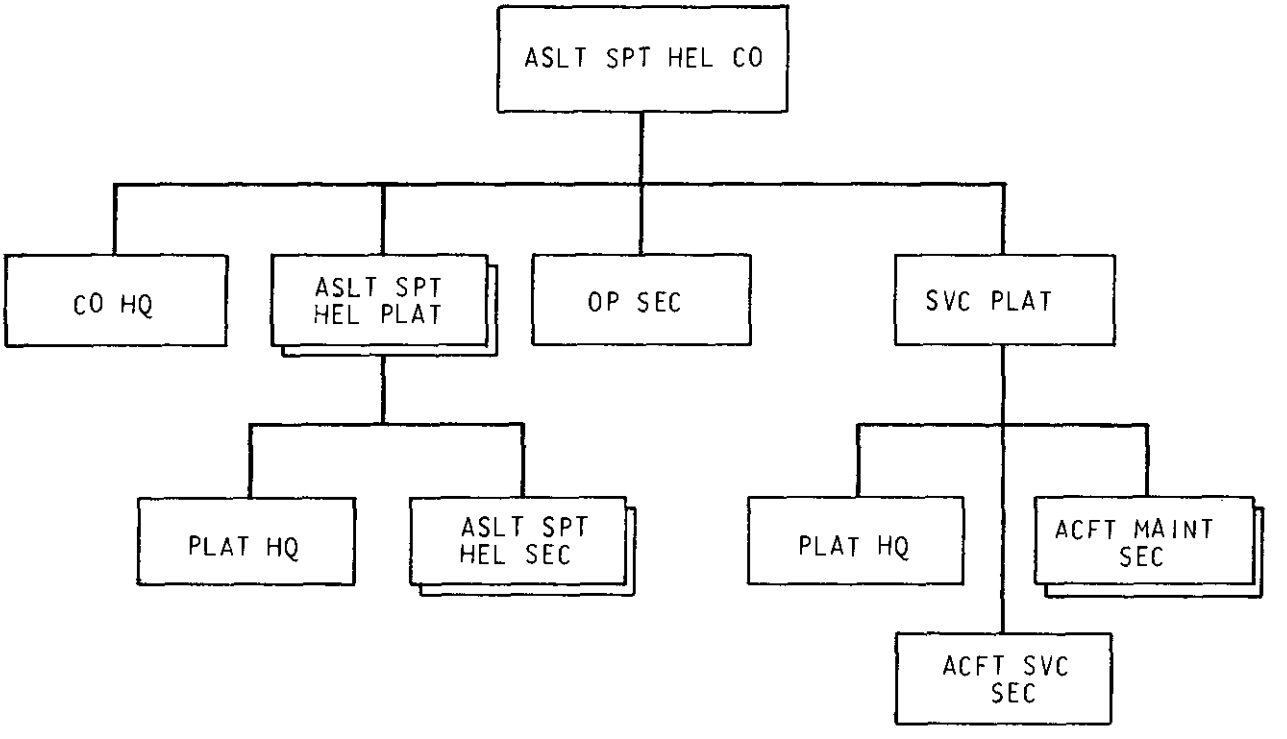


Figure 18–3. Assault support helicopter company.

of liaison officer during platoon size operations. Missions are received from the operations section or, when temporarily detached from the company, the supported unit. Each assault support helicopter section contains a section commander, and the aviators, flight engineers, and crew chiefs who fly and perform organizational maintenance of the section's helicopters.

18–9. Service Platoon

The service platoon of the assault support helicopter company consists of the service platoon headquarters, an aircraft service section, and two aircraft maintenance sections. The functions of the platoon are similar to those of the service platoon, assault helicopter battalion.

APPENDIX A

REFERENCES

JCS Pub 1	Dictionary of United States Military Terms for Joint Usage.
JCS Pub 2	Unified Action Armed Forces (UNAAF).
AR 30-41	Field Rations and Mess Operations.
AR 30-46	Subsistence Report and Field Ration Requests.
AR 55-10	Military Standard Transportation and Movement Procedure (MILSTAMP).
AR 95-Series	Aviation.
AR 190-11	Physical Security Standards for Protection of Weapons and Ammunition.
AR 220-58	Organization and Training for Chemical, Biological, and Radiological Operations.
AR 310-1	Military Publications—General Policies.
AR 310-3	Department of the Army Publications—Preparation, Coordination, and Approval.
AR 310-31	Organization and equipment authorization tables of organization and equipment.
AR 320-5	Dictionary of United States Army Terms.
AR 320-50	Authorized Abbreviations and Brevity Codes.
AR 350-1	Army Training.
AR 350-5	Military Education and Schools.
AR 380-5	Safeguarding Defense Information.
AR 380-40	Safeguarding Crypto-information.
AR 380-41	Control of cryptomaterial.
AR 380-51	Transmission of Classified Information.
AR 381-12	Subversion and Espionage Directed Against U.S. Army and Deliberate Security Violations.
AR 385-10	Army Safety Program.
AR 500-60	Disaster Relief.
AR 600-105	Army Aviation Officer Career Program.
AR 711-16	Utilization and Processing of DA Forms 2765 and 2765-1, Request for Issue or Turn In (Punched Card Series).
AR 725-50	Requisition, Receipt, and Issue System.
AR 735-35	Supply Procedures for TOE and TDA units or Activities.
AR 750-1	Maintenance Concepts.
AR 750-5	Organization, Policies, and Responsibilities for Maintenance Operations.
AR 750-8	Command Maintenance Management Inspections.
DA PAM 108-1	Index of Army Films, Transparencies, GTA Charts, and Recordings.
DA PAM 310-Series	Military Publications Indexes.
DA PAM 750-1	Preventive Maintenance Guide for Commanders.
FM 1-5	Aviation Company.
FM 1-10	Army Aviation Organizational Aircraft Maintenance.
FM 1-60	Army Aviation Air Traffic Operations—Tactical.
FM 1-80	Aerial Observer Training.
FM 1-100	Army Aviation Utilization.
FM 1-105	Army Aviation Techniques and Procedures.

FM 1–110	Armed Helicopter Employment.
FM 3–10	Employment of Chemical and Biological Agents.
FM 3–12	Operational Aspects of Radiological Defense.
FM 5–20	Camouflage, Basic Principles and Field Camouflage.
FM 5–36	Route Reconnaissance and classification.
FM 6–20–1	Field Artillery Tactics.
FM 6–20–2	Field Artillery Techniques.
FM 6–40	Field Artillery Cannon Gunnery.
FM 8–5	Medical Service Units, Theater of Operations.
FM 8–10	Medical Service, Theater of Operations.
FM 8–15	Division Medical Service, Infantry, Airborne, Mechanized and Armored Division.
FM 8–35	Transportation of the Sick and Wounded.
FM 9–6	Ammunition Service in the Theater of Operations.
FM 9–30	Maintenance Battalion: Division Support Command.
FM 10–50	Supply and Transport Battalion, Division Support Command.
FM 11–50	Signal Battalion, Armored, Infantry, and Infantry (Mechanized) Divisions.
FM 11–57	Signal Battalion, Airborne Division.
FM 11–86	Combat Area Signal Battalion, Army.
FM 17–36	Divisional Armored and Air Cavalry Units.
FM 19–15	Civil Disturbances and Disasters.
FM 19–25	Military Police Traffic Control.
FM 20–60	Battlefield Illumination.
FM 21–5	Military Training Management.
FM 21–6	Techniques of Military Instruction.
FM 21–11	First Aid For Soldiers.
FM 21–26	Map Reading.
FM 21–30	Military Symbols.
FM 21–40	Chemical, Biological, and Nuclear Defense.
FM 21–41	Soldier's Handbook for Defense Against Chemical and Biological Operations and Nuclear Warfare.
FM 21–48	Chemical, Biological, and Radiological (CBR) and Nuclear Defense Training Exercises.
FM 21–60	Visual Signals.
FM 21–76	Survival.
FM 21–77	Evasion and Escape.
FM 24–1	Tactical Communications Doctrine.
FM 24–16	Signal Orders, Records and Reports.
FM 24–18	Field Radio Techniques.
FM 27–10	The Law of Land Warfare.
FM 29–22	Maintenance Operations in the Field Army.
FM 30–5	Combat Intelligence.
FM 30–20	Aerial Surveillance—Reconnaissance, Field Army.
FM 31–16	Counterguerrilla Operations.
FM 31–20	Special Forces Operational Techniques.
FM 31–21	Special Forces Operations.
FM 31–22	U.S. Army Counterinsurgency Forces.
FM 31–25	Desert Operations.
FM 31–30	Jungle Training and Operations.

FM 31–50	Combat In Fortified and Built-Up Areas.
FM 31–71	Northern Operations.
FM 31–72	Mountain Operations.
FM 31–73	Advisor Handbook for Counterinsurgency.
FM 33–1	Psychological Operations—U.S. Army Doctrine.
FM 33–5	Psychological Operations—Techniques and Procedures.
FM 41–5	Joint Manual For Civil Affairs.
FM 41–10	Civil Affairs Operations.
FM 44–1	U.S. Army Air Defense Employment.
(S) FM 44–1A	U.S. Army Air Defense Employment (U).
FM 54–2	The Division Support Command.
FM 55–35	Motor Transport Operations and Motor Transport Units.
FM 55–45	Aircraft Maintenance Services and Units in the Field Army.
FM 55–46	Army Aviation Transport Services and Units in the Field Army.
FM 57–35	Airmobile Operations.
FM 57–38	Pathfinder Operations.
FM 61–100	The Division.
FM 100–5	Field Service Regulations—Operations.
FM 100–10	Field Service Regulations—Administration.
FM 101–5	Staff Officers' Field Manual: Staff Organization and Procedure.
FM 101–10-series	Staff Officers' Field Manual: Organizational, Technical, and Logistical Data.
FM 105–5	Maneuver Control.
TM 1–215	Attitude Instrument Flying.
TM 1–225	Navigation for Army Aviation.
TM 1–250	Fixed Wing Flight.
TM 1–260	Rotary Wing Flight.
TM 1–300	Meteorology for Army Aviation.
TM 3–210	Fallout Prediction.
TM 3–220	Chemical, Biological, and Radiological (CBR) Decontamination.
TM 5–330	Planning, Site Selection, and Design of Roads, Airfields, and Heliports in the Theater of Operations.
TM 5–366	Planning and Design for Rapid Airfield Construction in the Theater of Operations.
TM 10–401	The Army Food Advisor.
TM 10–405	Army Mess Operations.
TM 10–500–6	Air Drop of Supplies and Equipment from Army Aircraft.
TM 10–1101	Petroleum Handling Equipment and Operations.
TM 38–750	Army Equipment Record Procedures.
TM 38–750–1	Maintenance Management: Field Command Procedures.
TM 55–601	Troop Movement Guide.
TM 57–210	Air Movement of Troops and Equipment.
ATP 20–5	Army Training Program for Field Exercises and Maneuvers.

APPENDIX B

SUGGESTED OUTLINE FOR AN SOP

CLASSIFICATION

Headquarters
Location
Date

STANDING OPERATING PROCEDURES

I. GENERAL

A. Purpose.
A statement of the general coverage and uses of the SOP.

B. Conformity.
Instructions as to the requirement for conformity in the procedures of subordinate and supporting units.

C. Organization.
When applicable, designations of habitual task organizations.

D. Combat Orders, Reports, and Distribution.
General information common to all combat orders and reports, which is applicable to all units of the publishing headquarters.

II. COORDINATION OF TACTICAL OPERATIONS

Detailed procedures are covered in appropriate SOP annexes. This paragraph in the body of the SOP contains information of general applicability, together with references to the appropriate annexes.

A. Command and Control.

1. Command Post.
   a. Reporting Procedures.
   b. Headquarters—include composition, movement, control and succession of command.
2. Liaison and Coordination.
3. Signal Communication—include reestablishment of a signal facilities under nuclear attack.

B. Intelligence.

1. Prisoners of War.
2. Communications and Electronic Intelligence.
3. Map Instructions—covering availability, requisition, and distribution.
4. Weather—include sources of information and distribution.
5. Air Reconnaissance—include instruction on availability and requests.

6. Counterreconnaissance.
7. Attached and Supporting Intelligence Specialists.

C. Coordinating Agencies—include all organizations for coordination tactical operations other than fire support.

D. Procedures.

1. Fire Support Coordination.
   a. Procedures and Means of Coordination.
   b. Coordination Measures.
   c. Air Defense.
2. Regulation and Coordination of Use of the Airspace Over the Combat Zone.
3. Regulation and Coordination—of the use of that portion of the electro-magnetic spectrum of primary interest to the tactical commander.
4. Coordination—of tactical operations with administrative procedures.

E. Techniques.
Operations Orders, Reports, and Distribution.

F. Special Considerations.

1. Actions to Minimize Effects of Nuclear Attack.
2. Tactical Cover and Deception.
3. Army Aviation—List items from policies of higher headquarters on operation, use, and control.
4. Night Operations.
5. Combat Surveillance.
6. Mobility—include movement by motor, rail, water, and air.
7. Psychological Operation—include support thereof.
8. Special Operations.
9. Rear Area Security—include antiguerrilla action.
10. Pathfinder Operations.

III. COORDINATION OF COMBAT SERVICE SUPPORT OPERATIONS

Only key operational procedures of general applicability are covered in the body of the SOP. Most of the subheadings below will refer to an annex for detailed coverage.

A. Coordinating Agencies. All organic or special organizations to coordinate combat service support.

B. Procedures. Control and Coordination of administrative procedures with tactical operations.

C. Techniques.
Administrative Orders, Reports and Distribution.
Orders and reports pertaining to administrative support units.

D. Detailed Considerations.

1. Logistics.
   a. Coordination of Logistics Activities Within Each Administrative Agency.

b. Materiel and Services.

(1) Supply. Class I, II and IV; III and IIIA; V; and Water (may be included as annexes).

(2) Services (Including Maintenance).

2. Medical Evacuation and Hospitalization.

3. Personnel.

a. Maintenance of Unit Strength.

(1) Strength, Records, and Reports. An effective unit disaster, casualty, and personnel status reporting procedure should be included.

(2) Replacements.

b. Personnel Management.

(1) Personnel Procedures. Personnel policies and activities used to implement the personnel management program.

(2) Prisoners of War and Civilian Internees. All normal phases of processing, handling, accounting, and evacuation other than interrogation will be covered.

c. Development and Maintenance of Morale.

(1) Morale and Personnel Services. This includes authorized absences (pass, R&R, leave), decorations and awards, mail, PX supplies, finance, chaplain, and special services.

(2) Graves Registration Service. Policy on recovery and disposition of dead—friendly or enemy.

d. Maintenance of Discipline, Law and Order. Troop conduct and appearance, handling of stragglers and other disciplinary cases.

e. Headquarters Management. Applicable only to the CP of the publishing headquarters.

f. Miscellaneous. Matters not covered in above.

4. Area Damage Control. All possible disasters should be considered. Coordination must be made with rear area security plans.

5. Public Information and Community Relations. Policies made to improve military-civilian relations.

_____

Commanding

(SOP)

Annexes: (To be included as appropriate when material is voluminous or is used by relatively few members of the command. At lower units, two or more annexes may be combined.)

A—International Operations and Movement of the Headquarters
B—Prisoners of War, Captured Documents and Materiel
C—Air and Ground Reconnaissance
D—Counterintelligence
E—Fire Support Coordination

F—Actions to Minimize Effects of Nuclear Attack
G—Army Aviation
H—Chemical and Biological Operations
I—Movements
J—Unconventional Warfare
K—Psychological Warfare
L—Rear Area Security
M—Chemical
N—Engineer
O—Medical
P—Aircraft Maintenance and Supply
Q—Evasion and Escape
R—Downed Aircraft Procedures, Search and Rescue
S—Aircraft Accident Investigation Plan
T—Crash Rescue Plan
U—Task Force Commander's Checklist (app G)
V—Civil Affairs Activities (FM 41–10).
W—Air Defense.

APPENDIX C

AVIATION SAFETY

1. General

The purpose of the Army aviation safety effort is to accelerate accomplishment of the Army aviation mission through improved operation of aircraft. The effort includes the prevention of aircraft accidents and the minimization of the effects of accidents. Active participation of all personnel is necessary for an effective safety program.

2. Aviation Safety Program

The aviation safety officer administers the aviation safety program in accordance with Army Regulations of the 95-series and other appropriate publications such as AR 385-40. The aviation safety program which is conducted to reduce and keep to a minimum accidental manpower and resultant monetary losses within the Army, thus providing more efficient utilization of resources and advancing the combat effectiveness of the Army. In administering the safety program, the aviation safety officer advises the commander on aviation safety matters and assists in maintaining an optimum relationship between accident-free aircraft operations and uncompromised mission accomplishment. The aviation safety program includes—

a. Aviation safety training.

b. Aircraft accident prevention plan.

c. Preaccident plan.

d. Aircraft accident prevention survey.

3. Aviation Safety Training

Safety training is conducted to cause each person concerned to become safety conscious to the extent of making continuous positive contributions to aviation safety. Crash rescue teams are trained in accordance with SR 95-50-1. Other personnel having specific duties within the safety program are included in the battalion safety training plan. The aviation safety officer should insure that each individual understands the necessity of performing his particular duties in a manner which is safe to himself and to others. Thus, maintenance and control tower personnel, weather reporting personnel, and all others concerned are made aware that safety is their responsibility and is not reserved for the aviator alone. This state of awareness is promoted through individual contacts, in meetings, by the use of posters and printed materials, through incentive awards, and by other means which the aviation safety officer may devise.

4. The Aircraft Accident Prevention Plan

The aircraft accident prevention plan is prepared and maintained by the aviation safety officer. This plan is established with the aid of the Aviation Safety Planning Guide published and distributed by the United States Army Board for Aviation Accident Research (USABAAR). It is intended to assist commanders of all echelons in planning and establishing an effective aviation safety program. It outlines the essential tasks and functions needed for a successful safety program.

5. Preaccident Plan

The preaccident plan is prepared and maintained by the aviation safety officer. This plan includes provisions for the following:

a. Crash Rescue Plan and Crash Alarm System.

(1) SR 95-50-1 contains details concerning the crash rescue plan. The crash rescue plan, included in the battalion SOP, discusses—

(*a*) Responsibility and duties of those concerned with crash rescue.
(*b*) Training requirements.
(*c*) Organization.
(*d*) Communications system.
(*e*) Procedures as to notification and actions of all concerned.

(2) The crash alarm system alerts the crash rescue team and others directly concerned with the crash rescue plan, including the operations officer, control tower and weather service personnel, and fire and ambulance teams.

(3) The crash rescue team proceeds immediately to the scene of the accident with the priority mission of giving aid to personnel injured in the accident. The team is equipped to deal with conditions such as fire or the threat of fire and the necessity for forcible entry into deformed aircraft wreckage. Each member of the crash rescue team must thoroughly understand his duties and be proficient in performing them.

b. Aircraft Accident Investigation Board. The aircraft accident investigation board is appointed by the battalion commander and serves on a continuing basis. The board conducts investigations of aircraft accidents for the sole purpose of assembling information for use in preventing future accidents. Information obtained from Army aircraft accident investigations is of a privileged nature and is specifically prohibited from use for punititve purposes or for matters of liability, litigation, or contractor design competition. See appendix D for details of agreement, STANAG 3531, Investigation of Aircraft/Missile Accidents/Incidents.

c. Assignment of Responsibility for Technical Assistance to the Aircraft Accident Investigation Board. All possible technical assistance should be readily available to the aircraft accident investigation board. Personnel responsible for providing this technical assistance include the flight surgeon, provost marshal, chaplain, public information officer, signal officer, transportation officer, engineer, and others possessing knowledge and skills necessary to the efficient and thorough investigation of an aircraft accident. The aviation safety officer advises and assists the investigation board, but normally is not a member of the board.

6. The Aircraft Accident Prevention Survey

The aircraft accident prevention survey is conducted to reveal the existence of potential or actual problem areas in which the need for corrective action is indicated. The survey thoroughly covers each component of the organization's aviation facility including the airfield, operations office, weather office, terminal control facility, aircraft operation, pilot training, medical safety procedures, maintenance procedures, instrument approach facilities (if any), and the accident prevention program. A basic aircraft accident prevention survey has been prepared by the U.S. Army Board for Aviation Accident Research for use as a guide in conducting the survey. The survey should be conducted as often as necessary to assure that effective corrective action has been taken since the last survey, and to detect new problem areas. The aviation safety officer advises the commander of the findings of the survey.

APPENDIX D

STANAG 3531

NATO—UNCLASSIFIED

Original English/French translation STANAG 3531

DETAILS OF AGREEMENT (DofA) INVESTIGATION OF AIRCRAFT/MISSILE ACCIDENTS/INCIDENTS

PART I

Definitions

1. For the purpose of this STANAG, the term aircraft/missile accident shall apply to any occurrence classified as an aircraft/missile accident or incident by any of the Nations involved.

2. For the purpose of this STANAG, the term "air force" shall include the Air Forces, Naval and Air Forces and Army Air Forces of the Nations concerned and includes a reference to the appropriate Air Force, Naval or Army authorities and "Air Force Law" shall include the law relating to such forces.

3. This STANAG shall apply only to accidents and incidents which occur to military aircraft/missiles.

4. For the purpose of this STANAG, the term "Nation involved" shall include the Nation owning the aircraft/missile, the Nation of whose territory (including territorial waters or ship) the accident(s) occurs, and the Nation to whom the crew(s) belongs.

5. For the purpose of this STANAG, the term "aircraft" shall include free balloons, gliders, airships and flying machines, whether manned or unmanned. The term "missile" shall include air-to-air, surface-to-surface, air-to-surface and surface-to-air missiles.

6. For the purpose of this STANAG, the term "aircraft/missile accident/incident" shall include accidents/incidents as defined in Part I, paragraph 1, which involve projectiles of all types, whether guided or unguided and free falling, rocket propelled, or fired from a cannon.

7. For the purpose of this STANAG, the "Operating Nation" shall be the Nation which owns the aircraft/missile or the Nation under whose direct control the aircraft/missile was being flown or operated at the time of the accident or incident.

8. For the purpose of this STANAG, an Aircraft/Missile Accident Safety Investigation means a systematic and thorough analysis, research

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and/or careful examination to disclose all relevant facts, conditions and circumstances associated with or surrounding each aircraft/missile accident, conducted for the sole purpose of accident prevention, quite separate and apart from, and in addition to, any investigation which may be required by the laws of the Nations involved.

9. An Aircraft/Missile Accident Safety Investigation Committee, or in the case of aircraft/missile accidents involving equipment, facilities and/or personnel of two or more member Nations, a Combined Aircraft/Missile Accident Safety Investigation Committee, is a body comprised of such investigators, medical and technical advisors, as may be deemed necessary by the country or each of the countries involved, appointed for the purpose of carrying out an aircraft/missile accident safety investigation as defined in paragraph 8.

PART II

Policies

1. Each Nation may conduct its own accident safety investigation, the proceedings and conclusions of which shall be privileged. Where permissible, representatives of other Nation involved will be invited to attend.

2. Whereas some NATO nations, either by law or procedure, follow a policy of permitting the results of investigations into aircraft/missile accidents/incidents to be used in disciplinary or legal proceedings and for the determination of the responsibility for claims, the reports and conclusions reached by Aircraft/Missile Accident Safety Investigation Committees shall be treated as privileged and shall not, either wholly or in part, be used as evidence for the purposes of collateral investigations, claims or litigation, without the agreement in each separate case of the Government of the Nations involved.

3. A separate investigation for the purpose of ascertaining the civil responsibilities may be conducted by the appropriate authorities of the country of occurrence in accordance with the national laws of the country of occurrence or other agreement ratified by the Governments concerned. If an investigation is required for air force disciplinary reasons, it shall be the responsibility of the individual Nations concerned to conduct such an investigation under their own air force laws. Each of these last two investigations shall be separate from the Aircraft/Missile Accident Safety Investigations.

4. When an airfield or launch site situated in allied territory is occupied by forces of one NATO Nation and an accident or incident occurs to one of its aircraft/missiles within the limits of such an airfield or launch site, the air force authorities of that Nation shall be responsible for all measures to be taken.

5. Member Nations shall cooperate in investigations of other member Nations into an aircraft/missile accident or incident, and wherever possible, shall release relevant information which does not compromise security or conflict with practices regarding privilege.

Communications with the Press

6. National authorities of the country of occurrence shall respect the security restrictions which are normally imposed by the Operating Nation with respect to the issue of statements to the press concerning accidents which occur within their territory. No statement shall be issued without the concurrence of the Operating Nation.

Implementation of Agreement

7. Each member country shall implement this agreement in appropriate regulations and directions, to include the following additional actions:

a. Establish procedures for notifying countries involved of the accident or incident and safeguarding wreckage in an undisturbed condition until the Safety Investigators of each Nation involved have released the wreckage.

b. Where there is a reason to suspect the presence of explosive or other hazardous conditions in a missile accident, the member Nation is to establish a safety zone around the location pending further information from, or handing over to, the Operating Nation.

c. Notify other member Nations of the names of the national agencies to be informed when equipment, facilities and/or personnel of that country are involved in an aircraft/missile accident or incident with the equipment, facilities and/or personnel of another country.

d. Designate an authority to be advised when a requirement arises for a combined aircraft/missile accident investigation.

PART III

Investigation Procedures

1. General

a. When an accident or incident occurs involving aircraft/missiles of one or more Nations on another Nation's territory or ship, the air force or other military authorities of the country of occurrence shall:

(i) Render all assistance necessary to injured crews and/or remove fatalities.

(ii) Provide a medical doctor, preferably with specialist aeromedical qualifications, to initiate any necessary medical investigation in accordance with STANAG 3318 (Edition No. 2)—"Medical Aspects of Aircraft Accident Investigation" and subsequently, where necessary, to assist the medical member or advisor to the Aircraft Accident Investigating Committee.

(iii) Request national and/or authorities to keep the scene of the accident guarded and untouched until the appropriate Safety Accident Investigation Committee has been notified. If the wreckage must be moved for technical or social reasons, or to prevent further damage to the aircraft/missile, a reconstruc-

tion must be made by means of photographs, drawings, maps, and witnesses.

(iv) Report the accident in accordance with the existing procedures of the country of occurrence. The country of occurrence will take immediate steps to notify the nearest representative of the allied authorities of the countries concerned (military attaches, nearest air force, army or naval base, etc.). The Nation operating the aircraft/missile shall be invited to send an accident safety investigation committee.

(v) Report to the Operating Nation's Authorities the names (where known) and the condition of injured persons, giving their location and the seriousness of their injuries..

b. National Safety Investigations

(i) The safety investigation shall be the responsibility of the Nation operating the aircraft/missile concerned except that when the Operating Nation does not wish to investigate an accident then the responsibility for investigation shall rest with the Nation on whose territory the accident occurred. An officer (or officers) of the country of occurrence may, with the concurrence of both countries, be attached to the Operating Nation's investigating committee as an official assistant or observer.

(ii) The investigations shall be initiated by the Operating Nation's authorities, after they have notified the appropriate air force staff of the country of occurrence and the appropriate national headquarters.

(iii) The medical aspects of aircraft accident investigation shall be in accordance with STANAG 3318 (Edition No. 2)—"Medical Aspects of Aircraft Accident Investigation."

(iv) An officer of the country of occurrence shall be sent immediately to the scene of the accident to facilitate the work of the investigating committee by collecting in advance all possible written statements and other evidence and, where required, to assist that committee.

c. Disposal of Fatalities

In the case of fatal accidents:

(i) An officer detailed by the country of occurrence shall take all necessary legal steps required by the local civilian authorities.

(ii) The local military authorities shall accord the honours prescribed by their own regulations to fatalities.

(iii) Fatalities shall be treated in accordance with the desires of the Nation(s) concerned.

Combined Safety Investigations

2. The following rules shall apply:

a. All aircraft/missile accidents or incidents involving equipment, facilities and/or personnel of two or more member Nations shall normally be investigated by a Combined Aircraft/Missile Accident Safety Investigation Committee. If there is an indication that equipment, facilities and/or personnel of any other member Nation were contributory causes to the accident, that member nation shall be notified and invited to participate in a combined investigation.

b. Composition of Combined Safety Investigations Committee

(i) Combined Aircraft/Missile Accident Safety Investigation Committees shall be comprised of such investigators and technical advisors as may be deemed necessary by each of the countries involved.

(ii) Upon notification of an aircraft/missile accident falling within the category in para 2a above, the Nations affected shall advise the Headquarters of the air force or missile arm of the country of occurrence of the names of the officers comprising their investigating group and will designate a senior member.

(iii) The investigators and technical advisors of member Nations involved shall be formed into one investigating committee, working under the unified direction of a coordinating group.

(iv) The coordinating group for the investigation shall be composed of the senior member of each Nation's investigating group.

(v) The most senior member of the Group appointed by the Operating Nation shall become President of the Combined Safety Investigation Committee.

(vi) When aircraft/missiles of two Nations are involved in accidents over the territory of a third Nation, the President of the Combined Accident Investigation Committee shall be determined by agreement among the Nations involved.

(vii) In cases where the Committee is unable to present an unanimous conclusion as to the prime and contributory causes of the accident, each national point of view shall be stated.

c. Coordination of Investigating Efforts

The coordinating group shall be responsible for overall direction of the investigation, shall organize the investigating committee into specialized sub-committees, as necessary, and shall conduct the investigation in accordance with the procedures normally used by the Operating Nation, in so far as this is possible under the terms of this STANAG.

d. Reporting

(i) The investigating committee shall report its combined findings in a report which shall include the following:

(a) Factual circumstances;

(b) Investigation and analysis;

(c) Findings and conclusions;

(d) Recommendations.

To this report will be attached such statements or exhibits as will make the findings more meaningful and comprehensive. The Chief Investigator of each Nation involved will indicate on the report his concurrence or nonconcurrence. This combined report may be separate or rendered apart from any other report required by pertinent regulations of the individual nations.

(ii) When one nation involved cannot directly participate in a combined investigation, that Nation shall have the right to request and receive copies of all the original reports and conclusions of the combined investigating committee. In the event combined investigation is not conducted because a nation involved has declined to participate, copies of the Aircraft/Missile Investigation Report prepared under paragraph 1(b)(i) above shall not be made available if privileged status precludes release of such reports.

APPENDIX E

EMPLOYMENT OF NON-AIR DEFENSE WEAPONS AGAINST AIRCRAFT

1. Purpose

The purpose of this appendix is to—

a. Recognize the threat of enemy airmobile operations, close air support, interdiction aircraft, and air reconnaissance against any unit in a combat theater.

b. Recognize the potential effect of the large volume of small arms fire that can be furnished by organic weapons against low flying hostile aircraft.

c. Reflect the necessity of commanders establishing detailed SOP for the identification and engagement of hostile aircraft to include how identification is accomplished, which personnel will fire, techniques of fire to be used, rules of engagement and controls to be exercised.

d. Reflect the necessity for training individual soldiers in aircraft identification, techniques of firing at aerial targets and response to control methods.

e. Emphasize the aggressive engagement of hostile aircraft with organic weapons as specified in carefully prepared SOP and rules of engagement.

f. Recognize the threat to friendly aircraft in failure to discriminate between hostile and friendly aircraft.

g. Place in proper perspective the tactic of withholding fire to preclude disclosure of positions.

2. Concept

a. The substantial low altitude air threat faced by units in the combat theater may be partially countered by aggressive use of the large volume of fire which non-air defense weapons can place against this threat.

b. Exercise of the individual and collective right of self-defense against hostile aircraft must be emphasized. Hostile aircraft include all attacking aircraft and those positively identified enemy aircraft which pose a threat to the unit. The requirement for exercise of this right has not been adequately emphasized in the past. Large volumes of fire from non-air defense weapons have proven capable of destroying both high and low speed aircraft or disrupting their attack. Exercise of this right does not demand specialized use of communications and air defense control procedures.

c. Indiscriminate use of non-air defense weapons must be prevented due to the resulting danger to friendly aircraft and troops and the requirement to place in proper perspective the technique of withholding fire to preclude disclosure of positions. Effective and safe employment of these weapons necessitates Army-wide training expenditures. Engagement of hostile aircraft in immediate self-defense will be most frequent and training emphasis should reflect this.

d. Situations may arise wherein the exercise of the right of self-defense should be temporarily suppressed, or when freer use of non-air defense weapons against aircraft should be encouraged. The former case involves a local decision that prevention of position disclosure is paramount. Notice of such restriction is disseminated through command channels. The latter case should be based on a theater-level decision.

e. Use of a single rule for engagement: "Engage hostile aircraft" is based on the knowledge that common sense interpretations of the rule

will be correct. For example, all aircraft attacking the unit and enemy aircraft performing operations such as forward air control, reconnaissance, surveillance, or dropping or landing troops are clearly "hostile aircraft."

3. Rule of Engagement

In the absence of orders to the contrary, individual weapon operators will engage attacking aircraft; engagement of all other hostile aircraft will be on orders issued through the unit chain of command and will be supervised by unit leaders. Nothing in this rule is to be taken as requiring actions prejudicial to accomplishment of the primary mission of the unit.

4. Techniques

The following techniques should maximize the destructive and/or deterrent effect against aircraft:

a. Engagement of Low Speed Aircraft. In accordance with the rule for engagement, engage low speed enemy aircraft with aimed fire, employing the maximum weapon rate of fire.

b. Engagement of High Speed Aircraft. In accordance with the rule of engagement, engage high speed enemy aircraft with maximum fire aimed well in front of the aircraft, and above its flight path, in order to force it to fly through a pattern of fire. This technique is not unaimed "barrage" fire, but requires a degree of aimed fire. It does not, however, call for careful estimation of aircraft speed and required lead.

c. Use of Tracer Ammunition. Automatic weapons should utilize the highest practical proportion of tracer ammunition to enhance the deterrent or disruptive effect.

d. Massed Fire. Units should employ a massed fire technique when using small arms and automatic weapons in an air defense role.

5. SOP Items

Company-level SOP should cover, but not be limited to, the following items relevant to engagement of aircraft with non-air defense weapons:

a. Applicability. Designate weapons operators concerned.

b. Relation to Primary Mission. The primary mission is never prejudiced.

c. Relation to Passive Air Defense. The necessity for aggressively engaging hostile aircraft is balanced with the requirement to place in proper perspective the tactic of withholding fire to prevent disclosure of position.

d. Authority to Engage. Authority to engage attacking aircraft delegated to individual weapons operators and to engage all other hostile aircraft on orders through unit chain of command, subject to the rule for engagement and rules for withholding fire.

e. Rule for Engagement. Normally self-defense only against all attacking aircraft and those positively identified enemy aircraft which pose a threat to the unit.

f. Rules for Withholding Fire. When ordered. When not positive that aircraft are actually attacking or otherwise hostile. When friendly aircraft or troops are endangered.

g. Position Selection. Applicable only to weapons specifically assigned an air defense role; e.g., designated single barrel caliber .50 machineguns. See FM 44–1.

h. Firing Techniques. Lead and superelevation. Massed fire. Maximum use of tracer ammunition.

i. Unit Training Requirements. Motivation and discipline. Gunnery Aircraft recognition.

APPENDIX F

REDEYE DEFENSE CONSIDERATIONS

1. General

a. The Redeye is a 29 pound, infrared homing, optically aimed air defense weapon that can be carried and operated by one man (FM 44–1A).

b. The Redeye weapon system can provide units with a self-defense capability against hostile aircraft within range and engagement capability. The Redeye weapon system is not a component of an integrated and coordinated air defense deployment. Normally the following engagement rules apply:

(1) Attack aircraft identified as hostile.

(2) Attack aircraft committing a hostile act.

c. The definition of a hostile act and the criteria for identification of aircraft will be published by the area air defense commander and will be incorporated in the unit standing operating procedure. For other items that should be covered in the SOP, see paragraph 2*g*, this appendix.

d. Unless otherwise directed, hostile aircraft within the capability of the weapon should be engaged. To avoid the disclosure of positions, commanders may direct that aircraft not be engaged in some special situations.

e. When permitted by theater rules, commanders in certain situations may direct that the Redeye team engage all aircraft not identified as friendly.

2. Employment

a. Redeye Mission. The Redeye mission is to provide local air defense of small combat and combat support units.

b. Organization. Redeye is employed by two-man teams normally allocated on the basis of one per combat and selected combat support company/battery/troop. Redeye is assigned to an air defense section in designated battalions/squadrons and designated brigade/regimental headquarters companies/troops.

c. Defense of the Unit in Position. Redeye teams depend upon visual means for the detection and identification of targets. The positions selected must provide for maximum observation and unobstructed fields of fire commensurate with associated consideration of likely avenues of approach, the desire to engage the enemy before he can strike the defended unit, and local ground security. At least one gunner continuously performs surveillance of the surrounding airspace, alternating with the other gunner as required. The gunners may be separate short distances where observation is otherwise limited. During periods of intense activity, both may act as gunners thereby doubling the rate of fire or covering additional avenues of approach. Surveillance is maintained in all direction with emphasis on the expected or most likely direction of attack. Units should prepare detailed SOP's for air defense based on Army and theater guidance. These SOP should incorporate provisions for early warning compatible with the unit mission and communications capability. Provision should be made for augmenting Redeye fires with those organic non-air defense weapons, primarily automatic weapons, capable of delivering large volumes of direct fire.

d. Defense of the Unit During Movement.

(1) In a company column, the company commander should place one team member near the front of the column and one near the rear, each with a portion of the available missiles. Appropriate primary and secondary

zones of responsibility should be assigned. All-around observation should be assured, some missiles should be unpacked and ready, and gunners should be ready to dismount quickly.

(2) During movements in which more than one team is involved; e.g., a battalion or brigade move, teams should be placed throughout the column with emphasis on the front and rear. Disposition of the teams within the column is made by the column commander. Route coverage may be improved by directing certain teams to occupy critical points along the route; however, road conditions or column speed may preclude leapfrogging.

(3) The team's ¼-ton truck with trailer will provide the required mobility in the majority of situations. In certain cases, the requirement for mobility may be such that temporarily dropping the trailer and carrying a reduced load of missiles in the truck itself is justified. When tracked vehicle transportation is mandatory in certain situations, the transportation must be obtained on a priority or share-the-ride basis.

(4) When company elements are greatly dispersed, Redeye positions are chosen in relation to the designated priority company element. During a fluid or dispersed situation, Redeye must usually remain with the priority company element.

e. Control. The Redeye gunner (primary duty) is normally permitted to engage all targets positively identified as hostile or committing hostile acts within the criteria set forth in guidance by higher headquarters. The gunner normally attacks the targets on his own initiative since time and space limitations do not permit the gunner to request permission to fire on any particular target. Unit commanders may impose further restrictions on Redeye fires to prevent compromising the unit location, but under no circumstances will the unit commander allow freedom to fire beyond that established by higher authority. The gunner has no authority to deviate from the established weapon control status, identification criteria, and rules for target selection.

f. Firing Doctrine. The engagement of a low performance aircraft is accomplished by one gunner firing a single weapon, assessing the results, and firing additional weapons as required. Several high performance aircraft may be simultaneously engaged by both gunners, each firing until the aircraft are destroyed or beyond engagement range.

g. Unit SOP. The unit SOP for Redeye operators should cover the following, as a minimum:

(1) Mission.

(2) Command.

(3) States of alert-manning requirements.

(4) Weapon control statuses and hostile criteria, to include:
  (*a*) Precise definition of terms.
  (*b*) Identification criteria and authority to declare an aircraft hostile.
  (*c*) Personnel with authority to authorize deviation.
  (*d*) Statement that self-defense is never denied.

(5) Rules for target selection.

(6) Firing doctrine.

(7) Fire coordination between team members.

(8) Communications.
  (*a*) Nets and frequency allocations.
  (*b*) Discipline and security.
  (*c*) Alternate communications.

(9) Reporting requirements.
  (*a*) Warning: air, ground, and CBR.
  (*b*) Operational status.
  (*c*) Position and displacement.
  (*d*) After action.

(10) Ground security.

(11) Passive air defense procedures.

(12) Standard vehicle loading and movement plan, to include measures to increase mobility.

(13) Logistics.
  (*a*) Resupply procedures.
  (*b*) Reports.
  (*c*) Maintenance.
(14) Emergency destruction plan.
(15) Site selection and alternate site selection.
(16) Safety procedures.
(17) Training.

3. Materiel

The Redeye team is equipped with the following items:

a. Transportation. The team and team equipment is transported in a ¼-ton truck and trailer.

b. Armament. The team is armed with the prescribed basic load of Redeye missiles. The basic load may be split between the gunners in certain situations. Each gunner has an M14 or M16 rifle.

c. Communications. An FM radio and telephone are provided to support team operations, and to permit receipt of orders from the unit commander and transmission of the alert to the comander and other elements upon the detection of hostile aircraft.

d. Orientation and Surveillance. Maps, a compass, and binoculars are provided to assist the team in self-location, orientation, and surveillance of the airspace.

e. Decontamination. A decontamination apparatus is carried in the vehicle to permit decontamination following a CBR attack.

APPENDIX G

SAMPLE AIRMOBILE TASK FORCE COMMANDER'S CHECKLIST

1. Ground Tactical Plan
   a. Mission(s).
   b. Objective(s).
   c. Alternate Objective(s).
   d. Distance of Objective(s).
   e. D-day and H-hour.
   f. Specific Tasks.
   g. Means Available.
      (1) Organic troops.
      (2) Air cavalry.
      (3) Aerial radio relay.
      (4) Airmobile column escort.
      (5) Engineer.
      (6) Signal.
      (7) Medical.
   h. Fire Support.
      (1) Tactical air support.
      (2) Tube artillery.
      (3) Aerial rocket artillery.
      (4) Assault helicopter gun ships (restriction to fire only).
      (5) Naval fire support.
   i. Boundaries and Control Measures.
   j. Assault Plan.
   k. Subsequent Operations.
2. Intelligence Requirements.
   a. Enemy Locations.
   b. Friendly Situation.
   c. Aerial Photos.
   d. Maps.
   e. Terrain Study.
   f. Weather Forecast.
   g. Map Reference System.
   h. Latest intelligence summary.
   i. Signal operation instructions—standing signal instructions.
3. Assault Landing Plan.
   a. Landing Zone(s) and Fixed Wing Strips.
   b. Assault Landing Formation.

c. Approach and Landing Direction.

d. Covering Fire.

4. Air Movement Plan.

a. Flight Routes (Primary—Alternate—Return).

(1) Landing zone release point—direction and distance to landing zones.
(2) En route formation.
(3) Air control point—command control point.
(4) Phase lines (if used).
(5) Leg distance and times.
(6) Altitude.
(7) Airspeed (use 70 knots in computation unless otherwise announced).
(8) Estimated time en route.
(9) Orbit areas for ARA and escort aircraft, if applicable.

b. Air Movement Table.

(1) Unit to be lifted.
(2) Number and type lift helicopter.
(3) Aviation unit.
(4) Takeoff times.
(5) Routes.
(6) Unit LZ.
(7) H-hour (landing time).

c. Marshalling Plan.

(1) Assembly areas.
(2) Unit pickup zone (primary—alternate).
(3) Pickup release point.
(4) Unit station time.

5. Supporting Plans.

a. Downed Aircraft Procedures.

b. Rally Points.

c. Evasion and Escape Instructions.

d. Eagle Flights.

e. Thunderbolt Plans.

f. Laager Plans.

g. Rules of Engagement.

h. Deception Plans.

i. Chemical, Biological and Radiological Operations.

j. Reconnaissance (Air-Ground).

k. Straggler Control.

l. Reporting (En Route, Lift-off, Touchdown, Intelligence and Contact).

m. Aircraft Disposition After Assault.

n. Prisoner of war plan.

o. Civil Affairs (refugee, Captured Food, Arms, Ammo).

6. Operations Requirements.
   a. Warning Orders.
   b. Liaison Officers (Receive and Dispatch).
   c. Attachments and Detachments.
   d. Briefings (Time, Place, Attendees).
   e. Preparation of operations order.
7. Logistics Requirements.
   a. Ammo, Demolition Resupply.
   b. Feeding Plan.
   c. Water.
   d. Medical Evacuation.
   e. Refueling.

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