

PREFACE

1. This manual provides doctrinal guidance to commanders and staff officers for requesting and coordinating the use of Air Force tactical air support and army aviation support. The system through which this is accomplished and is referred to as the air-ground operations system (AGOS). In addition to discussing the details of the air-ground operations system, this manual also discusses the planning, coordination, and various service responsibilities required for the overall efficient execution of air support operations.

2. The manual discusses the entire role of tactical air operations. To appreciate the significance of tactical air support the reader must understand the effect of air interdiction, in relation to the Army's role. The function of counterair is discussed along with the roles, mission, and doctrine of other services who provide tactical air support to the Army in the field. This manual is structured around the joint or unified command level; however, the field army, corps, division, brigade, and battalion are readily visible throughout. The doctrine applies to all geographical areas of the world and under varying levels of conflict. Because many of the concepts covered are doctrinal tenets pertaining to other services, procedures established by International Standardization Agreements (STANAG, SEASTAG) and Joint Chiefs of Staff (JCS) publications outlined herein have added significance.

3. Throughout the manual, the term close air support is used to include air attacks from all services against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the first and movement of these forces. Other commonly used terms relating to air support operations appear frequently. Inasmuch as these terms are generally referred to in their abbreviated form by personnel in the field, they also will be used as abbreviations herein. While initially being cumbersome, use of the terms in their abbreviated form will increase the reader's overall familiarity, with the subject. An index of abbreviated terms used in this manual is included at appendix B.

4. Chapter 2 outlines the missions and command and control responsibilities for tactical air operations. It discusses the inclusive air combat functions of air interdiction and counterair, their missions, characteristics, and commonly accepted operations.

5. Chapter 3 discusses in detail the third function of tactical air operations, namely air support operations. The major part of the chapter covers the fundamentals of air support, procedures for apportionment and allocation of air resources, the method of balancing the requirements for tactical air resources in relation to the Army aviation resources, categories of tactical air request, request channels and general request procedures, command and control, and airspace coordination.

6. Chapter 4 discusses the functions of close air support (CAS), tactical air reconnaissance, and tactical airlift that are included in tactical *air* support operations. It discusses each function in terms of the types of mission, procedures, and format used to request the air support and to control aircraft for the particular function.

7. Chapter 5 outlines the organization of the air-ground operation system. It discusses the organization, mission, functions, and staff responsibilities for both the Army air-ground system (AAGS) and the tactical air control system (TACS). Also provided is a discussion of the Navy/Marine system for control of air support operations. The communications procedures and nets used to provide a total integrated system are included in the chapter.

8. Chapter 6 discusses Army aviation support operations, air surveillance and reconnaissance, and airmobile operations. It also covers planning considerations, request channels, and procedures.

THE AIR-GROUND OPERATIONS SYSTEM

	Paragraph	Page
CHAPTER 1. INTRODUCTION (STANAG 2134)	1-1, 1-2	1-1
2. TACTICAL AIR OPERATIONS (STANAG 2099 and 2134)		
Section I. Introduction	2-1, 2-2	2-1
II. Counterair operations	2-3-2-6	2-1
III. Air interdiction operations	2-7-2-9	2-2
CHAPTER 3. AIR SUPPORT OPERATIONS (STANAG 2099 and 2134)		
Section I. Introduction	3-1, 3-2	3-1
II. Fundamentals of air support	3-3-3-15	3-1
CHAPTER 4. TACTICAL AIR SUPPORT FUNCTIONS (STANAG 2134 and 2129)		
Section I. Introduction	4-1-4-5	4-1
II. Tactical air reconnaissance	4-6-4-11	4-6
III. Tactical airlift	4-12-4-15	4-11
IV. Tactical air force aeromedical evacuation	4-16-4-22	4-15
CHAPTER 5. ORGANIZATION OF THE AIR-GROUND OPERATIONS SYSTEM		
Section I. Introduction	5-1-5-3	5-1
II. The Army air-ground system	5-4-5-7	5-2
III. The Air Force tactical air control system	5-8-5-12	5-7
IV. The Navy/Marine tactical air control system	5-13, 5-14	5-12
V. Air-ground operations systems communications	5-15-5-17	5-13
CHAPTER 6. ARMY AVIATION SUPPORT OPERATIONS (STANAG 2099 and 2129)		
Section I. Introduction	6-1, 6-2	6-1
II. Attack helicopter operations	6-3-6-6	6-1
III. Army air surveillance and reconnaissance	6-7-6-11	6-5
IV. Airmobile operations	6-12-6-15	6-7
V. General Army aviation missions	6-16-6-22	6-9
APPENDIX A. REFERENCES		A-1
B. INDEX OF ABBREVIATIONS		B-1

*This manual supersedes FM 100-26, 21 January 1970.

CHAPTER 1
INTRODUCTION
(STANAG 2134)

1-1. Purpose

This manual provides doctrinal guidance to Army commanders and staff officers for requesting and coordinating the use of Air Force (AF) tactical air support and Army aviation support. It establishes doctrine, procedures, and requirements for the planning, execution, and overall coordination of AF tactical air support and Army aviation operations.

1-2. Scope

a. This manual discusses in detail the air-ground operations system (AGOS), comprised of the Army air-ground system (AAGS), and the Air Force tactical air control system (TACS). It also discusses the organizational and operational aspects of the Army's and other services' contribution to the AGOS.

b. This manual conforms to existing Army doctrine and procedures for joint operations. Procedures and techniques from other manuals are repeated only when necessary for understanding and continuity.

c. The doctrine contained in this manual is written to have worldwide applicability for US forces under varying levels of conflict and geographical environments.

d. This manual is in consonance with the international standardization agreements (STANAG) listed below. These STANAG are identified by type of agreement and number at the beginning

of each appropriate chapter. The following terms are used to describe the types of agreements: NATO STANAG—STANAG applicable to nations of the North Atlantic Treaty Organization; CENTO STANAG—STANAG applicable to nations of the Central Treaty Organization; SEATO SEASTAG—Southeast Asia STANAG applicable to nations of the Southeast Asia Treaty Organization.

<i>Title</i>	<i>NATO STANAG</i>	<i>CENTO STANAG</i>	<i>SEA TO SEAS TAG</i>
Fire Coordination in Support of Land Forces _____	2099	2099	2099
Recognition and Identification of Forces on the Battlefield	2129	2129	2129
Offensive Air Support Operations _____	2134	2134	_____

e. Users of this manual are encouraged to submit recommendations to improve its clarity and 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 to permit complete evaluation. **Comments should be prepared** using DA Form 2028, Recommended changes to Publications, and **forwarded direct to the Commandant, United States Army Command and General Staff College, Fort Leavenworth, Kansas 66027**, to facilitate review and followup.

CHAPTER 2

TACTICAL AIR OPERATIONS

(STANAG 2099 and 2134)

Section 1. INTRODUCTION

2-1. General

a. Depending on the purpose, objective, and air component forces involved, air operations are either strategic or tactical.

b. The US Air Force strategic air command conducts strategic air operations against the enemy's warmaking capacity. The results of these operations are not readily apparent and normally do not directly assist in the land battle.

c. Tactical air operations are executed by the US tactical air force (TAF) command and include the functions of counterair, interdiction, and tactical air support. These operations, which generally require coordination with the ground combat forces, are executed—

To gain and maintain air superiority.

To prevent movement of enemy forces into and within the battle area and to seek out and destroy those forces and their supporting installations.

To provide aerial fire support, air reconnaissance, and airlift to surface forces to assist them in accomplishing the tactical mission.

d. Although all tactical air operations assist in the conduct of the land battle, most counterair and air interdiction operations are normally conducted in a manner or at such a distance from the battle area that detailed integration with the fire and movement of the friendly ground forces is necessary. A complete discussion of tactical air support operations is in chapter 3.

2-2. Command and Control

Employment of the TAF requires effective use of all available command and control resources. The Air Force component commander controls the employment of all assigned resources through the tactical air control system (TACS). Through the TACS, the Air Force component commander regulates tactical air forces and coordinates his air-space requirements with other users. The TACS may be adapted to interface technically and operationally with the tactical air control systems of other services and Allied forces who may not possess a sophisticated control system. A complete discussion of the TACS follows in paragraphs 5-8 through 5-12.

Section II. COUNTERAIR OPERATIONS

2-3. General

a. Counterair operations are conducted to gain and maintain air superiority, thereby preventing the enemy forces from effectively interfering with friendly surface and air operations. Effective counterair operations must consider destruction or neutralization of both the enemy's air offensive and defensive systems.

b. Because combat operations may be significantly impaired by enemy air opposition, the overall outcome of the counterair operations may exercise a direct influence on other air operations. Initially, counterair operations may demand the

highest priority of all TAF air operations until the enemy air threat is reduced.

c. Counterair operations generally are classified as offensive and defensive.

2-4. Offensive Counterair Operations

a. Offensive counterair operations are conducted to seek out and destroy enemy airpower as close to its source as possible.

b. Targeting for offensive air operations should be planned before hostilities begin and should be kept current based on the latest intelligence. Offensive counterair operations initiated at the

outset of hostilities, coupled with effective air defense, can result in early air superiority.

c. The Air Force component commander, subject to the approval of the joint/unified commander, determines the ratio of forces to be assigned to offensive and defensive counterair operations based on the level of the enemy air threat, vulnerability of friendly forces to air attack and the enemy's air defense capability. Generally, offensive counterair operations are emphasized until air superiority is gained.

d. Offensive counterair operations are typified by attacks against--

Airfields, tactical missile complexes, and immediate supporting facilities.

Command, control, and guidance facilities.

Petroleum, oil, and lubricants, munitions, and missile storage sites.

Surface-to-air defense systems.

2-5. Defensive Counterair Operations

a. Defensive counterair operations consist of all measures designed to nullify or reduce the effectiveness of attack by enemy air power. These operations involve both active and passive measures.

b. Active air defense measures are taken to detect, identify, intercept, and destroy any aerial threat to friendly installations. The primary air defense weapon systems are tactical fighter aircraft and air defense artillery.

c. Passive air defense measures consist of all measures that do not include active measures. Passive air defense measures require continuous emphasis by commanders and concern—

Effective radar coverage to provide early warning.

Cover, concealment, camouflage, dispersion, and frequent movement of personnel and equipment.

Continuous indoctrination of personnel.

2-6. Types of Counterair Missions

a. *Counterair Strikes.* These missions are designed to establish early air superiority by denying the enemy full use of his bases, aircraft, air defense weapons, and control systems.

b. *Fighter Sweeps.* These missions primarily are designed to destroy or neutralize enemy aircraft on the ground, but also may be used to challenge and destroy his air forces in the air.

c. *Screens.* These missions normally are used to restrict enemy air movements. They also may be used to enhance air defense by placing a screen of tactical fighter aircraft between the friendly forces and the enemy air threat.

d. *Combat Air Patrol.* These missions are used to provide aircraft patrol over an area, to protect a force, a critical area of a combat zone, or an air defense area to intercept and destroy hostile aircraft before they reach their target.

e. *Air Escort.* These missions are employed to prevent enemy air actions from disrupting friendly air interdiction/strike mission aircraft and airborne or airmobile operations. They also may be used to defend airstrike, air reconnaissance, airlift, and air rescue operations.

f. *Air Intercept.* These missions are employed to intercept intruding aircraft over or near friendly territory when hostile offensive air actions are a threat. They normally are undertaken sufficiently distant from vital target areas to permit defense in depth and require high performance aircraft and an integrated ground or airborne radar and communications system.

Section III. AIR INTERDICTION OPERATIONS

2-7. General

a. Air interdiction operations are conducted to destroy, neutralize, or delay the enemy's military potential before he can use it against friendly forces. A planned air interdiction campaign can deny the availability or movement of significant quantities of personnel and material.

b. The effect of an air interdiction campaign seldom is immediately apparent. A coordinated and sustained effort based on sound intelligence and an analysis of the enemy logistic system is required to achieve results.

c. Based on the joint force commander's guidance, the Air Force component commander determines the categories of the targets to be attacked. Necessary plans for the air interdiction will be prepared and executed; however, continuous coordination with the ground commander is essential.

d. While air interdiction operations may not achieve complete isolation of an area, they may—

Reduce the enemy's capability to mount an offensive.

Restrict the enemy's freedom of action and increase vulnerability to friendly attack.
Prevent the enemy from countering an increase unfriendly strength.
Reduce the enemy's battlefield reserves.

2-8. Air Interdiction Mission Considerations

a. Intelligence Consideration. Complete analysis of all intelligence information, including that derived from aerial surveillance and reconnaissance, agent reports, sensors and other means may reveal vulnerabilities in the enemy's operations. Since air interdiction operations are designed to impede *or* restrict the movement of enemy forces or material into, out of, or within the area of operations, "primary consideration must be given to the enemy's lines of communications (LOC). Air interdiction targets will include communication centers, roads, bridges, defiles, railroads, marshalling yards and supply centers.

b. Operational Considerations. Certain operational considerations must be weighed when planning and executing an effective air interdiction operation. An important consideration is the

timing of interdiction operations to coincide with continued pressure by the ground forces to cause the enemy to exhaust his resources,

2-9. Types of Missions

The two types of air interdiction missions are immediate and preplanned. The preponderance of the air interdiction operations are preplanned and they are classified as airstrikes or armed reconnaissance missions.

a. Airstrikes. Airstrikes maybe carried out by individual aircraft in a strike force conducting an attack against a target with the aid of electronic equipment. These missions require detailed target intelligence so that the planners can determine the composition and size of the strike force as well as the weapons and tactics required to destroy the target.

b. Armed Reconnaissance. Armed reconnaissance missions are conducted to locate and attack targets of opportunity. The aircraft employed may be equipped with sensory equipment and generally are directed against materiel, personnel, and facilities along surface communication routes.

CHAPTER 3

AIR SUPPORT OPERATIONS (NATO STANAG 2099 and 2134)

Section I. INTRODUCTION

3-1. General

Air support operations assist in the attainment of the immediate tactical objective. They are executed in direct coordination with ground combat elements. Detailed coordination and integration with fire and movement of friendly forces are required. Section I of this chapter discusses the air support operations performed by tactical air forces (TAF). Section II discusses the fundamentals of apportionment and allocation of air resources and the procedures for adjusting capabilities. Categories of tactical air requests, their relative priorities and request channels are also covered. Additionally, this chapter briefly discusses conditions of readiness and airspace coordination.

3-2. Air Support Operations

Air support operations are conducted by TAF, Navy, and Marine air arms and Army aviation elements organic to the field army. The fundamental difference between the support provided by the other services and that provided by the Army is that Army aviation support is an integral part of the Army commander's land combat forces and as such, is immediately responsive to his needs. Other service support, while providing an essential capability, requires a relatively long lead time in planning and may be subject to withdrawal or cancellation on short notice due to factors over which Army commanders have little or no control such as higher priority requirements, adverse weather, or enemy action. Air support operations provided by other services are generally referred to as tactical air support. These tactical air support operations include close

air support (CAS), tactical air reconnaissance, and tactical airlift. Tactical air support missions normally are executed by fighter, reconnaissance, and airlift aircraft of the Air Force; however, the Navy and the Marine Corps may provide tactical air support to the Army under certain conditions.

a. Close air support is air attacks against hostile targets that are in proximity to friendly ground forces and that require detailed integration of each air mission with the fire and movement of those forces. The fixed wing CAS strikes normally are controlled by an element of the tactical air control system (TACS) operating with the supported maneuver unit. This element is responsive to the needs of the commander of the ground forces that it is supporting.

b. Tactical air reconnaissance is the use of aircraft of TAF to obtain information on terrain, weather, and the disposition, composition, movement, installations, lines of communications (LOC), and electronic and communication emissions of enemy forces. Tactical air reconnaissance provides direct support to Army tactical operations. It includes artillery and naval gunfire adjustment, systematic and random observation of ground battle areas, targets, and airspace sectors by visual, optical, electronic, or other sensory devices.

c. Tactical airlift is the air movement of personnel and cargo by TAF available to the joint force commander. It is part of the air delivery link to the battlefield. Tactical airlift operations include air movement of personnel, supplies and equipment; aeromedical evacuation; parachute operations; and special warfare support operations.

Section II. FUNDAMENTALS OF AIR SUPPORT

3-3. Apportionment of Tactical Air Support Resources

a. Apportionment relates to the application of resources available. The joint force commander

establishes the priorities for and directs TAF apportionment. Specifically, apportionment relates to that proportion of the tactical air resources that will be applied to each of the combat func-

tions of counterair, air interdiction, and tactical air support. The commander's decision is based, in part, on the recommendations of the component commanders.

b. The Army component commander bases his apportionment recommendations for tactical air support on the requests of subordinate commands and his own analysis of the overall tactical situation to include operations and anticipated enemy initiatives. In practice, and over a period of time, a baseline or minimum normal level of CAS effort is established and, except during unusual circumstances, the daily or weekly apportionment process is essentially an adjustment to this norm.

c. The Air Force component commander bases his apportionment recommendations on his mission, the enemy air threat, availability of resources, and the availability of profitable interdiction targets.

d. On receipt of the component commanders' recommendations, the joint force commander makes his own estimate and apportions the available tactical air effort among the air combat functions. He expresses the apportionment in terms of percentage by type of available air effort and apportionment. This apportionment decision may apply for any period of time; however, it usually is confirmed daily.

e. When notified of the joint force commander's apportionment, the Air Force component commander determines the number of sorties available for tactical air support, interdiction, and counterair missions. He notifies the Army component commander, subordinate tactical air commands, and the elements of the TACS regarding the number of sorties apportioned for tactical air support. The Air Force component commander commits these sorties in response to Army requirements. Overall coordination is shared by the Air Force and Army component commanders. However, the Air Force component commander is the ultimate authority on scheduling, weather minimums, troop safety criteria, and other operational considerations.

3-4 Allocation of Tactical Air Support Resources

a. The Army component commander allocates most of his apportioned tactical air support sorties to subordinate commands. This allocation is expressed as a specified number of sorties. The Army component commander informs the Air Force component commander of the number of sorties allocated to each subordinate Army com-

mand. Subordinate field army commanders normally will retain a reserve and suballocate sorties to each subordinate command. These suballocated sorties generally correspond to and confirm the approved preplanned requests and also provide additional sorties to meet the unanticipated requirements of subordinate commands. The unanticipated requirements are designated as immediate requests.

b. Each subordinate Army commander may, in turn, suballocate the sorties. The corps commander normally will suballocate preplanned sorties down to division and separate brigades. This suballocation enables the division commander to see all available assets and provides his staff with sufficient air support information to develop a complete fire support plan. The immediate sorties suballocated to the corps normally are retained at that level. Army commanders allocating or suballocating sorties so inform the TACS agency at their echelon and also pass this information through command channels to the next higher headquarters.

c. Allocations or suballocations do not alter request procedures. Only commanders allocating or suballocating sorties can change the allocation or suballocation. These Army commanders inform the direct air support center (DASC) or the tactical air control center (TACC) of this allocation or suballocation through the collocated air liaison officer (ALO) in addition to giving the normal notification through the chain of command.

d. When the Army component commander has exhausted his apportioned sorties, he may request the joint force commander to provide additional sorties to the ground forces. The joint force commander may take these sorties from his own reserve (if retained) or he may reapportion his resources to provide the support.

3-5. Army Aviation Resources

Since attack helicopters are normally organic or attached to divisions or smaller units, the Army component commander is concerned with their allocation and employment only on an exceptional basis. In addition, all other Army aviation available to the Army component commander (except that required for command and control by the Army component headquarters) is normally either attached to, organic to, or placed in support of subordinate commands. In general, these assets will be under the operational control of the lowest command echelon capable of controlling and employing them efficiently.

3-6 Adjustment of Capabilities

a. The Army component commander returns tactical air support sortie allocations not required to the Air Force component commander for use in the counterair and air interdiction programs. Sorties allocated for tactical air support can be withdrawn for other purposes only by agreement of the Army commander or by direction of the joint force commander.

b. The distribution of the tactical air support sortie allocation may apply for one or more days, for the duration of an operation, or for any phase of an operation; however, the apportionment, allocation, and distribution are normally reviewed and confirmed daily.

3-7. Categories of Tactical Air Support Requests

a. Tactical air support requests are categorized as preplanned or immediate.

(1) Preplanned requests are utilized for air support mission requirements which cannot be anticipated sufficiently in advance to permit detailed mission coordination and prior planning.

(2) Immediate requests are utilized for air support mission requirements or immediate urgency which are not identified or anticipated sufficiently in advance to permit detailed mission coordination and planning. However, maximum feasible airspace and fire support coordination is accomplished in order to prevent or minimize disruption of other airspace operations.

b. Of the two categories, preplanned support is the more efficient and economical use of resources; therefore, effort is made to preplan all air support requirements. Preplanned requests are submitted as early as the tactical situation permits. The field army and TAF commanders jointly determine the cutoff time for receipt of preplanned air support requests. Requests received after the established time are processed as immediate requests. Preplanned missions also are more desirable from an airspace coordination standpoint because the flight paths/times and areas of action are known sufficiently in advance to permit the most effective airspace coordination and timely dissemination of information to all airspace users. Preplanned requests generally—

Allow sufficient time for thorough planning, coordination, briefing, and consolidation of requirements.

Permit the proper selection of aircraft, sensor, ordnance, or delivery system.

Contribute to safety.

Enhance delivery accuracy.

Integrate daily operations to insure timely accomplishment and prevent interference with other mutually supporting operations.

c. Immediate requests are submitted to meet unforeseen contingencies during operations. These requests usually cannot be avoided; therefore, planning must include provisions to meet contingencies. A commander normally retains a portion of his air support in reserve to meet immediate requests. While the size of the reserve varies with the tactical situation, a daily determination is made based on the mission, tactical situation, availability of air support, and any other factors that may influence the operation. Commanders should insure that sorties are not lost as a result of withholding too large a reserve or waiting too long to commit it. As the requirement for immediate air support becomes smaller, the reserve can be reduced and sorties can be employed against lesser priority targets. If the reserve is exhausted, additional sorties should be requested first from the next higher headquarters. If this request is denied, requirements may be met by diverting low-priority preplanned missions or by diverting aircraft engaged in other operations. Any Army commander who approved the original request may approve a diversion. Immediate requests are characterized by—

A limited reaction time and a lack of time for detailed planning and coordination.

A requirement for responsive communications, rapid execution authority, and positive control over the operation.

3-8. General Request Procedures

a. Air support requests can be initiated at any Army level of command. Members of the air element providing the air support advise their respective Army commanders on the capability of their units to fulfill the request. Approval or disapproval of the request rests with the commander of the requesting unit or his superiors. When the request passes to the commander at a headquarters, it becomes a requirement at that echelon. Any intervening headquarters in the request channel can—

Approve the request and forward it to the appropriate action agency.

Substitute another type support, e.g., field artillery in lieu of close air support.

Impose restrictions or establish coordination requirements.

Disapprove the request.

b. Whenever possible, requests for air support should be forwarded via a secure communications system such as the area communications system. This action can deny the enemy information which he could obtain from high frequency/single side band (HF/SSB) radios which are not currently provided with secure transmission equipment.

c. Just as air support requests may be satisfied by substituting a different type of support, requests for artillery fires, ground reconnaissance, or surface movements may be converted to requests for air support by any headquarters above the requestor. The most effective and economical means available is used to satisfy the requirement.

d. Air support requirements are accomplished by the lowest echelon possessing the capability to fulfill the requestor's need. Requirements may be met by using allocated air sorties or by employing organic, attached, or supporting Army aviation elements.

e. In all cases, the requesting headquarters is notified of the action taken by the headquarters having final authority.

3-9. Request Channels

a. *Preplanned Requests.* Requests for preplanned tactical air support missions are submitted to fire support coordination center (FSCC) or to tactical operations centers (TOC). The commander at each echelon evaluates the report; coordinate such requirements as airspace, fires, and intelligence; consolidates; and, if approved, assigns a priority/precedence to the request. He then forwards approved requests by existing voice circuits or radio teletypewriter nets to the next higher echelon; or routes the requirement to the appropriate staff section or executing agency for action. The tactical air support element (TASE) of the field army tactical operations center (FATOC) makes the final consolidation and approves preplanned requests for combat support airlift, CAS, and tactical air reconnaissance within the resources allocated to the Army. In the case of requests for airlift attached to the Army, the field army support command (FASCOM) movement control center (MCC) makes this consolidation and provides the approval. After field army approval, the requests become an Army requirement and are passed to the Air Force TACC for execution. The requestor is notified of the approval. The requestor also is notified if the requests are disapproved at any echelon. The TACC accomplishes the necessary planning and issues

orders for execution. Orders for preplanned tactical air support missions are passed to subordinate commands of both the tactical air force and field army to insure complete understanding and full coordination of effort.

b. *Immediate Requests.* Immediate requests initiated below battalion level are forwarded to the battalion command post by the most rapid means available. At battalion, the commander or his authorized representative considers each request and passes approved requests to the tactical air control party (TACP). The TACP transmits the request directly to the direct air support center (DASC) collocated with the tactical air support element (TASE) of the corps or separate division tactical operations center (DTC). The TACP at each intermediate headquarters monitors the request. Acknowledgement of the request by intermediate TACP indicates approval by the associated headquarters unless, within a specified period, a disapproval is transmitted. Commanders may desire and direct that each intermediate TACP acknowledge and transmit approval of the request after proper coordination. The direct air support center coordinates the request with the corps tactical air support element. Meanwhile, intermediate TACP pass the request to the associated headquarters for action and coordination. All echelons coordinate simultaneously. If any Army echelon above the initiating level disapproves a request or substitutes another support means (e.g., Army aviation or field artillery), the tactical air control party at that headquarters notifies the direct air support center at corps and the originating tactical air control party, who notifies the requestor. If the corps headquarters where the direct air support center is located or a higher headquarters disapproves the request or substitutes another means, the direct air support center notifies the originating tactical air control party, who notifies the requestor. Pending approval of the request by the corps headquarters, the direct air support center accomplishes the planning and coordination necessary to satisfy the request. When the corps commander or his representative approves the request, the direct air support center initiates the necessary action to satisfy the request. If all allocated sorties are committed, the corps commander can request additional sorties from the next higher echelon. If additional sorties are not available, the DASC can request additional sorties from the TACC or, with the supported Army element's approval, he can divert lower priority sorties.

3-10. Priority and Precedence of Tactical Air Support Requests

a. Priority.

(1) All tactical air support requests are assigned a priority by the requesting unit. This priority is an indication of the importance of the request in relation to the requester's tactical situation. The combined or joint force commands will normally establish the priorities for each mission within the categories of tactical air support. The priority neither governs whether the request will be accomplished nor indicates the final order of its accomplishment. The headquarters authorized to take final action on the request determines the overall priority when the request is evaluated for its contribution to the overall mission of the command.

(2) When appropriate, intervening headquarters that approve or forward the request should enter a remark in the remarks or special instructions section of the request, indicating the relative importance of the request to that level of command. The priority established by the requesting unit remains with the request until its final approval. When several requests are consolidated, the headquarters making the consolidation enters a priority to indicate the relative importance of each mission to the overall mission of the command.

(3) The priority of a request is indicated by entering a Roman numeral "I" through "IV" in the priority section of the request. Priorities are the same for all types of air support; however, the descriptions of criteria for determining the correct priority are different for CAS, air reconnaissance and airlift. These general criteria are described in subsequent chapters for each type of support.

b. *Precedence.* Circumstances may arise when a command will submit a number of requests having the same priority. In this case, the originating headquarters should assign a precedence or order of accomplishment for each request to further aid higher headquarters in determining the importance of the request to the requester. The precedence establishes a priority within a priority. A precedence is not required on all requests; however, when many requests of the same priority are made or when air support resources are limited, it should be included. The precedence is entered in the remarks or special instructions sections of the request form.

3-11. Numbering Air Support Requests

a. Air support requests are identified by a request number consisting of a numeral, a letter of the alphabet, and another numeral, e.g., 1A501. The first numeral identifies the type of request; the letter of the alphabet is a standing operating procedure (SOP) alphabetic designation of the requesting unit; and the last numeral is the number of the request.

b. The types of air support request and the number identifying a particular type are-

1. _____ CAS
2. _____ air reconnaissance
3. _____ airlift

c. Alphabetic designation of units for air support request purposes normally is contained in the field army SOP. Each unit in the field army may be assigned a designation, or major subordinate commands may be assigned blocks of letter designators. These commands, in turn, make the unit designations. When the alphabet is exhausted, a double letter system is employed, e.g., AA, AB, AC, * * *, BA, BB, * * *, FA, FB, etc.

d. Requests are numbered consecutively by calendar year beginning with 1 in each unit. The request number assigned by the unit originating the request is retained throughout all processing. When requests are consolidated, each original number should be placed in the remarks or special instructions block of the consolidated request form so that each request retains its identity.

e. Coordination should be effected with the appropriate agency of the TACS to insure that the Army request number is included in the TAF fragmentary order to aid in identifying requests. Normally, the fragmentary order includes the number parenthetically behind the TAF mission; however, the TAF commander determines the procedure to be followed.

3-12. Conditions of Readiness

a. The primary conditions of readiness for air support are-

(1) *Air alert.* The extreme condition of operational readiness wherein aircraft are airborne in the vicinity of the battle area awaiting a requirement for immediate air support.

(2) *Ground (deck) alert.* Aircraft that are on the ground or deck, in the case of carrier-based aircraft, fully serviced and armed with combat crews prepared to respond to execute an air support request within a specific time.

b. Air alert has the advantage of greatly reducing the reaction time in responding to require-

ments for air support; however, this condition is often wasteful in terms of manpower and equipment and offers little latitude in selection of aircraft, armament, sensor, or delivery system. Air alert normally is employed only when other conditions of readiness cannot meet the Army commander's requirements and there is a high degree of assurance that the sortie will be used.

c. As with preplanned requests, ground (deck) alert is the more efficient and economical use of available air support resources; therefore, this condition of readiness is preferred over air alert. The disadvantage of greater response time can partially be overcome by operating aircraft from forward airbases and by enhancing the state of readiness of the aircrews. When response time is extremely critical, aircrews can remain in the aircraft prepared to take off except for starting the engine. Ground (deck) alert—

Allows more time for planning, coordination, briefing, and consolidation of requirements.

Permits the selection of the most effective aircraft, sensor, ordnance, or delivery system.

d. A condition of readiness is not restricted to a type of air support requirement. Aircraft to meet a preplanned requirement can be placed on either ground or air alert, as can aircraft designed to fulfill immediate requirements. Good planning dictates that, when a requirement is known or anticipated, a preplanned request be submitted and aircraft be positioned or placed in a condition of readiness that will allow the most rapid, effective response to the requirement.

3-13. Airspace Control

a. All airspace in the theater, particularly over the combat zone, is subject to use by all friendly forces. Theater policies for the coordinated use of this airspace are based on the necessity for permitting each participating force to utilize and exploit its combat capabilities with minimum interference with other friendly forces.

b. Fire support coordination must be effected before using fire support that is not under a unit's direct control against targets within the unit's boundaries and short of the fire support coordination line (FSCL). The FSCL is a line established within a theater of operations to insure coordination of conventional and nuclear fires, such as by close air support, which are not under a commander's direct control but which may effect current tactical operations. The FSCL is not normally required for units lower than corps, since

other control measures such as the no-fire line and boundaries are used at lower levels. The establishment of the fire support coordination line is normally coordinated with the appropriate tactical air commander because it could limit air interdiction operations.

c. Within the theater, the combined or joint force commander establishes the boundaries within which airspace control is to be exercised; provides the general priorities and restraints to be applied with regard for the requirements of all users of the airspace; and resolves differences that cannot otherwise be resolved by the component commanders concerned. He establishes the broad guidance necessary to insure coordination of the airspace operations of participating services or national components. The combined or joint force commander normally will designate a single service or national component commander as airspace control authority for the supervision of these functions throughout the theater. When authority is so delegated, the combined or joint force commander retains approval authority for control measures of airspace utilization and air traffic control.

d. The Air Force component commander normally is designated as the airspace control authority for the theater with responsibility for coordinating the establishment of an airspace control system for use throughout the theater. In this effort he coordinates with the Army component commander and other component commanders to establish procedures for air traffic control in and over the field army areas. He will insure that the maneuver force has maximum possible freedom of action in airspace over the combat zone.

e. The Army component commander is delegated the authority to control proper employment of his organic aircraft, air defense, and surface-to-surface fire support on an immediately responsive basis in the airspace over those land areas under his control. This delegation of authority normally is accomplished by the joint force commander through the airspace control authority. It is accomplished in close coordination with the airspace control authority who will, when requested, establish temporary designated airspace for Army use in accordance with the priorities of the joint force commander. Only the combined or joint force commander is authorized to overrule the Army component commander's airspace control procedures within this designated airspace.

f. Airspace control affects all operations and, therefore, is a command function. While all air-

space users have requirements for airspace use in support of the command mission, airspace requirements frequently conflict. The overall system established for airspace control must provide for timely and effective means for minimizing and resolving these conflicts in accordance with the joint force commander's priorities. Ideally, the airspace control rules and procedures must be developed and exercised before hostilities begin. Army airspace control doctrine and techniques are provided in FM 44-10 (Test).

3-14. Special Munitions

a. Special munitions include both nuclear and nonnuclear warhead sections; atomic demolition munitions; nuclear projectiles; chemical (lethal and incapacitating) agents/munitions; and associated spotting rounds, propelling charges, and repair parts. Also included is the general category of missile bodies and related components. The procedures and the functions of the air-ground operations system (AGOS) are generally the same in an environment where special munitions are employed as in an environment where only conventional munitions are employed. The joint force commander prescribes special procedures or modifications of doctrine deemed necessary for the employment of special munitions in tactical air operations.

b. When authorized, requests for special munitions fires are transmitted through fire command channels to the commander or his representative authorized to act on the request. Concurrently, notification of the request is sent through support channels to alert fire support units and to insure prompt delivery of the munitions. The high degree of reliance on radio communication in requesting special munitions fires increases the possibility of enemy intercept and subsequent exploitation of those communications. It is imperative, therefore, that adequate provisions are made for effective communications security practices. If tactical air resources are to be used to deliver the munitions

the agencies of the army ground operation system offer advice and assistance on the employment of tactical air delivery means. On approval to employ any special munitions, the agencies of the AGOS insure that adequate warning is sent to tactical air organizations and agencies.

c. FM 61-100 contains a discussion of nuclear and chemical fires and request channels; FM 100-30 (Test) provides doctrine for tactical nuclear operations and FM 101-31-1 provides doctrine for the employment of nuclear munitions; FM 3-10 contains doctrine for the employment of chemical agents.

3-15. Records and Reports

a. The number of records and reports varies with the requirements imposed by the headquarters and the tactical situation; however, they are kept to the minimum necessary for efficient operations.

b. Permanent records normally consist of SOP and reference publications.

c. Temporary records normally consist of copies of requests; a journal; applicable current operation orders (OPORD), operation plans (OPLAN), annexes, appendixes, or overlays; and a daily status and results board. These records are retained as long as required for current operations, usually 6 months. For historical purposes, the journal should be closed at the end of each 24-hour period and should be forwarded to the appropriate staff agency for inclusion with the other records attached to the command journal.

d. There are no permanent or recurring reports prescribed for Army air-ground system (AAGS) agencies. Local commanders prescribe the temporary reports required and whether they will be of a recurring nature. AR 340-1 contains information concerning records maintenance and disposition.

e. FM 101-5 contains suggested formats for the above documents.

CHAPTER 4

TACTICAL AIR SUPPORT FUNCTIONS

(STANAG 2134 and 2129)

Section I. INTRODUCTION

4-1. General

This chapter discusses the functions of close air support (CAS), tactical air reconnaissance, and tactical airlift that are included in tactical air support operations. While these functions are generally identified with the Air Force, elements of other services often are called on to provide this support to the Army. Paragraphs 4-1 through 4-5 provide a general discussion of the missions included in CAS, the request procedures and format for preplanned and immediate strikes, and the procedures for location and control of aircraft in the target area. Paragraphs 4-6 through 4-11 discuss the missions of tactical air reconnaissance in addition to the air reconnaissance collection methods that may be utilized. It covers both the preplanned and immediate request procedures, request format, control of aircraft, reports, and their methods of dissemination. Paragraphs 4-12 through 4-15 discuss the categories of tactical airlift and the procedures and forms for requesting airlift which may be either attached or allocated to the Army. Paragraphs 4-16 through 4-22 discuss tactical aeromedical evacuation provided by the Air Force,

4-2. Close Air Support (CAS)

Close air support consists of air attacks against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and maneuver of those forces. The CAS missions are executed by aircraft of all services. This section discusses that CAS provided by the tactical air forces (TAF) of other services, which is used when Army fire support means cannot fire on the target or when the added firepower of tactical fighter aircraft is necessary to obtain the results desired. When approved, these attacks are planned, directed, and controlled by elements of the appropriate service tactical air control system (TACS).

4-3. Priorities

a. Priority I targets are those that are preventing or are immediately capable of preventing the execution of the plan of action; e.g., enemy mortar or field artillery fire preventing movement of friendly troops, or enemy columns moving up in sufficient force to penetrate friendly lines.

b. Priority II targets are those that are seriously interfering with the execution of the plan of action; e.g., a target that is delaying a friendly advance or is causing heavy casualties during the advance.

c. Priority III targets are those that are capable of ultimate serious interference with the execution of the plan of action; e.g., a target that may be able to execute a counterattack against friendly forces during or after the advance.

d. Priority IV targets are those that are capable of only limited interference with the execution of the plan of action or influence thereon; e.g., enemy tactical units that are not inhibiting a friendly advance or enemy logistic units supporting engaged tactical units, and, by their nature, should be located and destroyed.

4-4. Close Air Support Request Procedures

a. General.

(1) The ground unit commander, with recommendations from his staff and the tactical air control party (TACP), determines which enemy targets are to be attacked by tactical fighter aircraft.

(2) The ground unit commander requesting CAS is responsible for troop safety limits and specifying the target, its priority, its location and description, the results desired, the desired time on target, and the latest time that the CAS can be used. Deviation from the desired time and "not-later-than" time and changes that influence troop safety limits must be approved by the unit originating the request.

(3) Requests for CAS can be initiated at any level of command. They may either be preplanned or immediate.

(4) Only ground force commanders or designated representatives can cancel or disapprove a CAS request. The Air Force component commander can cancel GAS missions based on operational considerations such as the air defense threat, weather or similar factors. Members of the air element providing CAS act as advisers on requests.

b. Request Form.

(1) Figure 4-1 illustrates the form used for an Air Force air request. The format complies with NATO and CENTO Standardization Agreement (STANAG) Number 2134, *Offensive Air Support Operations*. While standing operating procedures (SOP) may deviate from the specific format and information to be entered, this form is applicable to both the US Armed Forces and all member nations of NATO and CENTO.

(2) A request form is completed for each Air Force air support mission requested. The form serves as a guide to insure that all required information is transmitted to supporting agencies. The completed form should be retained as a record of the request.

c. Preplanned Close Air Support Requests.

(1) Allocated CAS effort should be used for preplanned strikes to the maximum extent possible. Ordnance and aircraft can be matched to the target; mission planning can be more complete; and missions can be better integrated into tactical operations.

(2) Requests for preplanned CAS are submitted through the fire support coordination centers (FSCC) at battalion and brigade and the fire support element of tactical operations centers (TOC) at division, corps, and field army. Field army makes final approval and forwards the requests to the tactical air control center (TACC) as CAS requirements. The TACC orders the mission flown by one of its tactical fighter units.

(3) Preplanned close air support requests are forwarded over existing communication systems to the field army. Sole user communication circuits may be used when authorized.

d. Immediate Close Air Support Requests.

(1) Immediate CAS missions are flown from sorties set aside from the daily allocation for this purpose or, if these are exhausted, by diverting preplanned sorties. They are used against targets of opportunity, targets that rapidly develop as a

result of the ground commanders action, and in operations where targets are not identified in time to permit detailed planning. When possible, ordnance and aircraft are selected according to the target to be attacked. Frequently, however, whatever ordnance and aircraft are most readily available are used. If the desired effect on the target is not achieved by diverted ordnance the originator must re-submit the request. Therefore, airstrikes conducted in response to immediate requests may not be as effective as preplanned airstrikes and should be kept to a minimum.

(2) Requests for immediate CAS are submitted through the Air Force air request net operated by the TACP. Requests are forwarded directly from the originating echelon to the direct air support center (DASC) collocated with the corps tactical operations center. The DASC immediately begins planning for the execution of the mission. When the request is approved by the corps tactical air support element (TASE), the direct air support center requests the tactical air control center to scramble a portion of the sorties allocated for this purpose or to fulfill the request from other than Army allocated resources.

(3) Figure 4-2 illustrates immediate CAS request channels.

4-5. Target Location and Aircraft Control

a. Normal Procedure.

(1) Once launched, preplanned and immediate CAS missions are controlled in the same manner. A control and reporting center (CRS), a control and reporting post (CRP), or a forward air control post (FACP) directs the fighter aircraft to, a designated point where control is passed to the forward air controller (FAC). Methods used by the FAC to direct the fighter pilot may include the use of marking by ordnance, the path of another aircraft, smoke or other ordnance fired from surface weapons, ground-marking panels, terrain reference, or a combination of these means. When the FAC directs the Army to mark a CAS target with field artillery, he requests this support through the associated TOC or fire support channels.

(2) If necessary to control strike aircraft and assist the pilots in locating the target, the FAC may operate from an aircraft. In situations where the normal control means of the tactical air control systems are too far removed from an operation to perform adequate planning and close control, as in the initial stages of airborne and amphibious operations, an airborne battlefield command control center or a tactical air coordi-

FROM	TO	TYPE	PRIORITY	CLASSIFICATION
FORMAT (Not to be transmitted) (See Note 8)				EXAMPLE MESSAGE
AIR REQUEST. Always start of message.				AIR REQUEST
AIR REQUEST/MISSION No. (See Notes 6 and 7.)				1/A/501
A. DETAILS OF REQUEST. Destroy/or neutralize/or harass/or search. Describe targets to attack/look for (personnel, vehicles, equipment, in open, dug in, numbers, direction of movement if any). Grid reference(s) of target or of location(s) to search or line search numbers. If photo confirmation is required after a visual recce mission, add CFM.				A. Destroy TWELVE tanks in wood JA356465.
B. TIME OVER TARGET. Specific time or AS SOON AS POSSIBLE (ASAP) and a NOT LATER THAN (NLT) time/latest time information of value. Use full date-time group if required for clarity.				B. 1600Z-1630Z
C. POSITION OF FRIENDLY FORCES. If within 1,000 meters, position is to be given, preferably in relation to an easily recognized topographical feature. Failing this, the position in relation to the target by bearing and distance or a grid reference. If no friendly forces within 1,000 meters, NIL is to be specified. This paragraph MUST always be completed.				C. NIL
D. CONTROL ARRANGEMENT (of the following if applicable):				
D-1. Radar Control Agencies. Call signs and frequency of initial control radar.				Dish Pan on TADC
D-2. Radar Control Agencies. Call sign and frequency of forward control radar.				Hand-off to Platter on TADC
D-3. TACP/ASOC/DASC. Call sign and frequency.				Fat Man on TADC
D-4. TACP/ALO. Call sign and frequency.				Red Baron on TADC
D-5. TACP/FAC. Call sign and frequency.				Deep Six on TAD 1
D-6. Contact point/orbit point/initial point. Position where mission leader makes initial radio contact with FAC. (May be one of the three listed.)				Crossroads at JA322415
D-7. Markers. Indicator smoke, panel, etc.				Red smoke
E. IN-FLIGHT REPORT. Give call-sign and the frequency to whom in-flight report is to be made if one is necessary. (See Note 9.)				
F. SQUADRON (OR WING).				F. 8
G. NUMBER AND TYPE OF AIRCRAFT.				G. FOUR F 104
H. ARMAMENT.				H. Rockets
I. OTHER INFORMATION/INSTRUCTIONS.				I. 8/8 at 2000: vis 7 km W/V 201/15

Figure 4-1. Air request format

NOTES

¹ Purpose: This message is used when units/formations and tasking agencies respectively request offensive air support in the form of close air support or air reconnaissance not requiring the employment of specific sensors or submission of imagery interpretation reports for which the Air Reconnaissance Request Message is provided.

² Procedures: Requests for immediate support are passed over the Air Force Request Net to the tasking agency. Requests for pre-planned support normally are passed over the command channels.

³ Mission Priorities: To assist the tasking agency, the senior unit/formation in the theater may establish a system of priorities to be allotted to requests by initiating units/formations.

⁴ Precedence: Depending on the tactical urgency to the addressees in relation to other message traffic.

⁵ Security: The lowest acceptable classification consistent with content should be used.

⁶ Request Numbers:

- a. Request numbers are prefaced by 1 for close air support requests or 2 for tactical air reconnaissance requests and 3 for airlift request.
- b. The subsequent letter and number group identifies the requesting unit/formation and the serial number of its request; identifying letters and blocks of numbers are allotted to units/formations and coordinated by the appropriate headquarters in the region, e.g., I/A/501.
- c. The request number is used to identify the mission throughout these procedures, and the mission is tasked, flown, controlled, recovered and reported on as I/A/501.

⁷AK Task/Mission No.:

- a. Normally the Air Task/Mission No. is the same as the AIR REQUEST No. and is used to identify the mission throughout these procedures. When used in the air I/A/501 may be abbreviated to MISSION 501.
- b. If, for any reason, the tasking agency decides that, for example, Air Request I/A/501 is to be flown as Air Task I/A/550, they send the Accept/Refuse Message as "AR I/A/501 accepted as I/A/ 550." Thereafter, the mission is tasked, flown, controlled, recovered and reported on as I/A/550. When calling forward control agencies, the mission leader would establish contact as follows. "FORTUNE this is MISSION 550 for REQUEST 501 ." Thereafter mission number only would be used,

⁸Omission of Paragraph Prefix Letters: If not required, paragraph prefix letters are omitted, except in the case of C which always requires a location references) or specific NIL.

⁹Control Arrangements: Insert call-sign and frequency of appropriate control agencies. Frequencies are never to be transmitted in plain language unless emergency conditions render it essential. previously allocated circuit designators are to be used instead. For example, TADC means "Tactical Air Direction Common" frequency on which control agencies or ALO will keep listening watch. It is allotted along with other Tactical Air Direct Frequencies for Forward Air Controllers known as TAD1, TAD2, etc.

Figure 4-1—Continued.

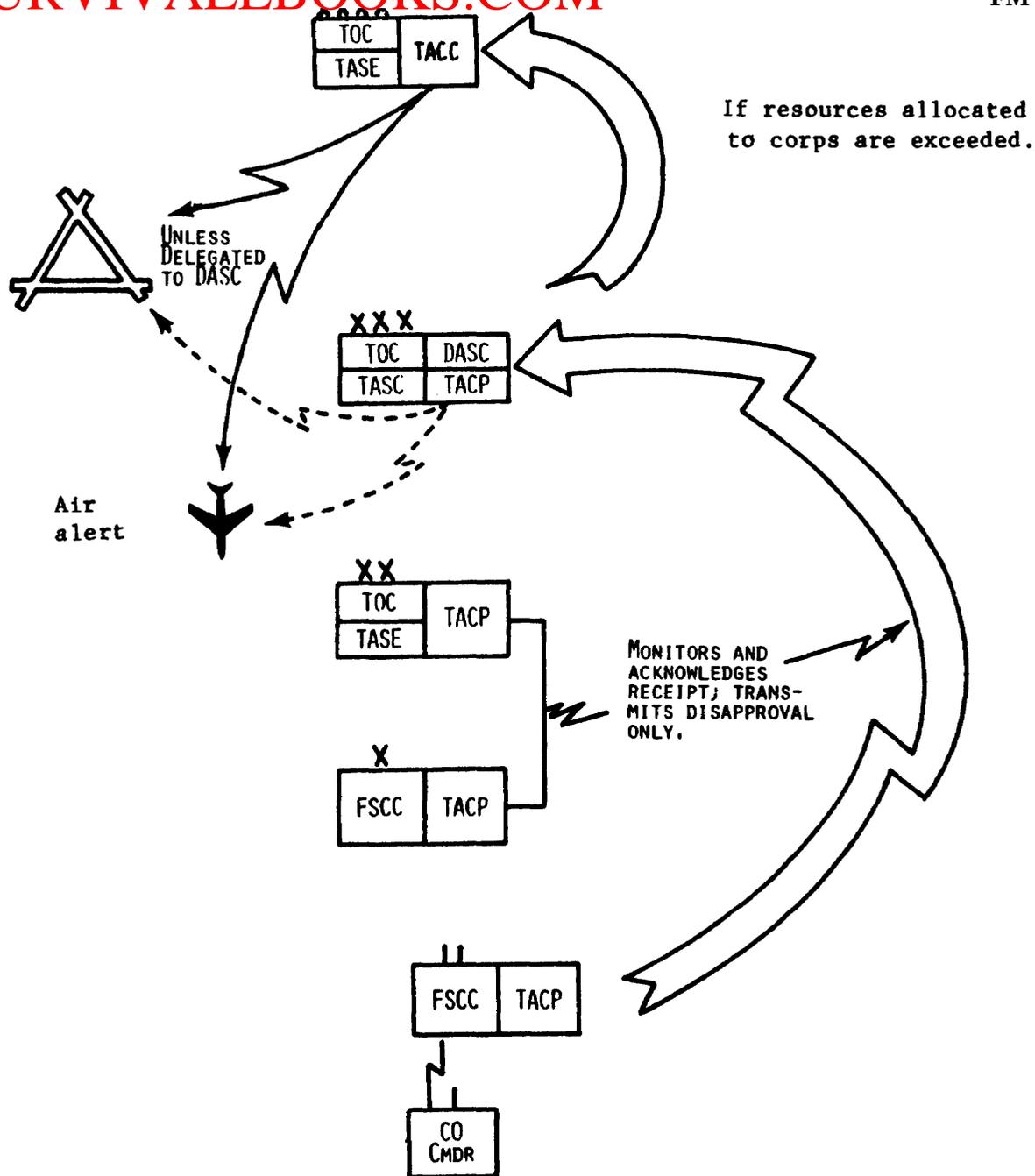


Figure 4-2. Immediate close air support request channels.

nator, airborne (TACA) or both may be used. These elements work in conjunction with FAC accompanying the forward units of the Army.

(3) While departing the target area, the pilot reports damage assessment and intelligence information of an immediate tactical value to the Air Force control agency. The same report, including mission results, is passed by the FAC through the appropriate air liaison officer (ALO), or TACP to the Army.

(4) During conditions of reduced visibility or in the absence of FAC, an air support radar

team (ASRT) may be used. However, strike accuracy and battle damage assessment is degraded and troop safety limitations are increased.

b. Emergency Procedures. When a FAC is not available to direct a CAS strike, Army personnel may direct the strike, using the following procedures:

(1) A field artillery or mortar forward observer (FO) may mark or otherwise identify the target for the attacking aircraft. The FO requires notification in time to position himself for the mission. If the FO has access to air-ground communications, the direct air support center

(DASC) or a tactical air control party (TACP) briefs the fighter aircraft pilot on the target and instructs him to contact the FO for further assistance. When contacted by the pilot, the FO gives the target description, grid coordinates, and necessary safety information about friendly forces and generally follows the same procedures as the FAC. The FO identifies the target by map or terrain references or marks the target with artillery or mortar smoke or white phosphorous projectiles.

(2) When the FO has no air-ground communications, he establishes contact by ground communications with the appropriate TACP or DASC fighter duty officer. The TACP or the DASC relays the FO's information to the fighter aircraft.

(3) If an FO is not available, other qualified individuals may be used to assist in locating the target for a CAS mission. In all cases, the ground commander assumes responsibility for troop safety.

Section II. TACTICAL AIR RECONNAISSANCE

4-6. General

a. A primary function of tactical air reconnaissance is to extend the ground reconnaissance capability arid to support the integrated intelligence operations of the Army.

b. Tactical air reconnaissance missions in support of the Army may be executed by the Navy, Marine Corps, or the Air Force. However, the Air Force normally provides the largest portion of the total effort required. The theater commander establishes policies and priorities for employment of these resources.

c. Tactical air reconnaissance missions collect information in support of military air and surface forces engaged in combined, joint, or unilateral operations. The information collected concerns terrain, weather, and the disposition, composition, movement, installations, lines of communications, and electromagnetic emissions of enemy forces. Artillery and naval gunfire adjustment and systematic and random surveillance of ground battle areas are also conducted by tactical air reconnaissance missions. Tactical reconnaissance missions are conducted during day and night operations and under all weather conditions by using complex sensory equipment. The coordination and integration of tactical air reconnaissance with ground operations are accomplished through the facilities of the TACS and the Army air-ground system (AAGS).

4-7. Types of Air Reconnaissance

a. Visual. *Visual* reconnaissance consists of area search, specific search, route reconnaissance, and weapon fire adjustment.

b. Permanent Record Imagery. Permanent record imagery provides recorded images which can be studied, analyzed and interpreted to give more detailed and accurate information than can be

obtained by visual observation. Both optical imagery and nonoptical imagery are available.

(1) *Optical imagery.* Optical imagery is available in black and white, color, infrared, and camouflage detection in a variety of formats.

(2) *Nonoptical imagery.* The principal types of nonoptical imagery are infrared, airborne radar, and LASER. Nonoptical imagery may be used in combination with other types of reconnaissance or during periods in which visual reconnaissance and optical imagery are not feasible.

c. Electronic Warfare Reconnaissance. There are essentially two types of electronic warfare reconnaissance: active and passive. The active type of electronic warfare reconnaissance is represented by such surveillance target acquisition and night observation devices as side-looking airborne radar and forward-looking airborne radar. The passive type of electronic warfare reconnaissance is a category of intelligence information derived from communications intelligence and electronic intelligence. Electronic warfare reconnaissance provides electronic order of battle through detection, location and identification of high threat communications-electronics emitters associated with weapons systems. Additionally, electronic warfare reconnaissance information is used to provide early warning, target acquisition, target development, surveillance, and support to electronic countermeasures.

d. Weather Reconnaissance. Weather data are obtained from visual observations and airborne weather and space indication devices. These data are used to update weather forecasts and as aids in making operational decisions.

4-8. Priorities

a. Priority I requests include surveillance of enemy units or activities, to include nuclear

delivery means, that could prevent, or are preventing, the accomplishment of the force mission.

b. Priority II requests include surveillance of enemy units or activities capable of immediate serious interference with the force mission and surveillance required in the conduct of current tactical operations.

c. Priority III requests include surveillance of enemy units or activities capable of ultimate serious interference with the force mission and surveillance required to support planned future operations.

d. Priority IV requests include surveillance of enemy units or activities capable of limited interference with the force mission and surveillance required for administrative and logistical purposes.

4-9. Tactical Air Reconnaissance Request Procedures

a. General.

(1) Requests for tactical air reconnaissance may be initiated at any level of command and are handled the same as CAS, except G2 air instead of G3 air personnel process and coordinate the request. Requests may be for immediate missions or preplanned missions in support of future operations.

(2) The Army commander at each echelon, with advice from his staff, determines which intelligence requirements of his command will be fulfilled by tactical air reconnaissance. Army commands above the requesting echelon may substitute another collection means.

(3) The commander requesting tactical air reconnaissance states the location of the target or area; the results desired; the specific element of intelligence information required; and, when imagery is requested, whether prior coverage is acceptable. Results desired are expressed in terms of reports, imagery, scale, and so on. Restrictions on acceptable imagery and scale should be minimized to allow the supporting tactical air reconnaissance organization to make substitutions which may be necessary in order for them to meet the intelligence information requirement. If prior coverage is acceptable, the earliest usable prior coverage is indicated.

(4) Care must be exercised to insure that requests are initiated sufficiently in advance of the time that the information is required to allow for collection, processing, evaluation, and interpretation. The advance time required varies between commands according to organization, loca-

tion, and procedure and is established by local SOP.

(5) Only Army commanders or designated representatives may cancel or disapprove tactical air reconnaissance requests. Members of the air element providing air reconnaissance support act only as advisers.

(6) Requests may express a requirement for one-time continuous, or repetitive coverage.

(7) Requests that originate in the joint force headquarters are submitted directly to the air component commander for action. These requests are consolidated with those of the service components that have been approved in accordance with the guidance and priorities of the joint force commander.

b. Request Form.

(1) Figure 4-3 illustrates the format used to request tactical air reconnaissance when the air request message at figure 4-1 is inadequate. The format complies with NATO and CENTO Standardization Agreement (STANAG) Number 2134, *Offensive Air Support Operations*. While SOP may deviate from the specific format and information to be entered, this format is applicable to both the US Armed Forces and all member nations of NATO and CENTO.

(2) A request format is completed for each tactical air reconnaissance target requested. The format serves as a guide to insure that all required information is transmitted to supporting agencies. The completed format should be retained as a record of the request.

c. Preplanned Tactical Air Reconnaissance Requests.

(1) A preplanned mission is the most efficient and economical type of mission because it allows sufficient time for coordination, planning, briefing, and consolidation of requirements. It also permits proper selection and allocation of aircraft and sensors and eliminates the wasting of capabilities by insuring that all available resources are programmed for specific mission accomplishment. The proper interpretation, integration, and dissemination of the information gathered can also be programmed into the total work effort. Preplanned air reconnaissance requests are forwarded over existing communications systems to the field army. Sole user communication circuits may be used when authorized.

(2) Requests are examined by intelligence personnel at each echelon to verify that the information is not already available and to determine if requests comply with the objectives of the in-

FROM	TO	TYPE	PRIORITY	CLASSIFICATION
<p>FORMAT (Not to be transmitted)</p>				<p>EXAMPLE MESSAGE</p>
<p>AIR RECCE REQUEST: Always start of message.</p>				<p>AIR RECCE REQUEST</p>
<p>L. ORIGINATOR'S SERIAL NUMBER. Each originator is given a serial number consisting of a prefix followed by a number as laid down by the regional headquarters. Prefixes are the headquarters demanding, e.g., AFCENT, AFNORTH, 4ATAP.</p>				<p>L. 2/AFCENT 121</p>
<p>M. TYPE OF RECONNAISSANCE. State type of sensors required and technical details for the execution of the air reconnaissance.</p>				<p>M. Vertical...Photo</p>
<p>N. NATIONAL MAP SERIES AND SHEET NUMBER. Because of the large variety of maps used both in training and operations by nations, these details must be given in full.</p>				<p>N. M745 sheet 4102</p>
<p>O. DESCRIPTION OF TARGET AND MAP REFERENCES. So as to leave the recipient of the request in no doubt as to the requirements, it is necessary to give an exact location or area. In the case of oblique, the NEAR boundary of the area to be photographed and the direction from which photograph is desired will be stated. If GRID reference is used, state GRID type, i.e., UTM, GEOREF, etc., otherwise state latitude and longitude to the nearest minute.</p>				<p>O. Area of wood at PU683971-crossroads at PU791972-rail bridge at PU791724-road junction at PU601721. UTM Grid.</p>
<p>P. OBJECT OF THE REQUEST AND RESULTS DESIRED. It is important that the exact purpose of the request is stated, in order that the most satisfactory results may be produced.</p>				<p>P. Suspected Missile System.</p>
<p>Q. PHOTO SCALE OR LIMITS ACCEPTABLE. Whenever possible, this heading should be filled in on the advice of a photographic interpreter. The scale should be quoted in figures, e.g., 1:10,000.</p>				<p>Q. 1:10,000</p>
<p>R. NUMBER OF PRINTS, PLOTS OR REPORTS REQUIRED. This should never exceed the number actually required. If a photointerpretation report will suffice, prints should not be ordered.</p>				<p>R. Ten prints and 2d phase interpretation.</p>
<p>S. DELIVERY ADDRESS, DATE, TIME. State clearly where the prints, plots, or reports are to be delivered, and the time and date on which they are required. If there is not haste, as much time as possible should be given for final delivery, so as to allow requests of a more urgent nature to be dealt with.</p>				<p>S. Headquarters AFCENT 151700Z. Jun</p>
<p>T. LATEST ACCEPTABLE TIME AND DATE. The date and/or time after which the prints, plots or reports are no longer required. If delivery cannot be made by the date stated, the request is canceled.</p>				<p>T. 1200Z 17 Jun</p>

Figure. 4-3. Air reconnaissance request format.

FORMAT (Not to be transmitted)	EXAMPLE MESSAGE
<p>U. SPECIAL INSTRUCTIONS. Time over target, if required; the degree of urgency, or when making more than one request, the degree of priority; and the security classification of the material requested. If immediate photointerpretation requirements or general photointerpretation are required in addition to the MISREP, this must be clearly stated here. Give any instructions or information not already provided, that will aid the planning or successful accomplishment of the mission.</p>	<p>U. Nil</p>

NOTES

- ¹Procedure: This message is used to request air reconnaissance when the Air Request Message is inadequate for, or not applicable to, the requirements of the intelligence staff.
- ²Precedence: Depending on the tactical urgency to the addressees relation to other message traffic.
- ³Security: The lowest acceptable classification consistent with content should be used.

Figure 4-3--Continued.

telligence collection plan established by the commander. Each echelon approves or disapproves preplanned requests submitted by subordinate units. The request originator is advised of a disapproval and is given the reason. At field army the requests are consolidated and assigned a priority. The requests are submitted by G2 air to the Army liaison element (ALE) in the tactical air control center where they are combined with joint task force and Air Force requirements into a fragmentary order to be flown by tactical reconnaissance aircraft.

d. Immediate Tactical Air Reconnaissance Requests.

(1) Immediate tactical reconnaissance requests are characterized by the urgency of time involved between the request for information and its reception. These requests are generated by unforeseen intelligence requirements of immediate tactical value. A portion of each day's tactical air reconnaissance sorties is set aside to meet these contingencies.

(2) Requests for immediate tactical air reconnaissance support are submitted using the same procedure as explained for the submission of immediate CAS missions. Figure 4-4 illustrates immediate tactical air reconnaissance request channels.

(3) If all resources have been committed and additional requirements arise, these requirements may be satisfied by assigning additional missions to airborne aircraft, diverting aircraft from other missions, or by scrambling aircraft programmed for preplanned missions of lower priority. The appropriate ground force commander or a designated representative on the advice of the Army liaison officer determines whether a previously planned or immediate mission will be diverted.

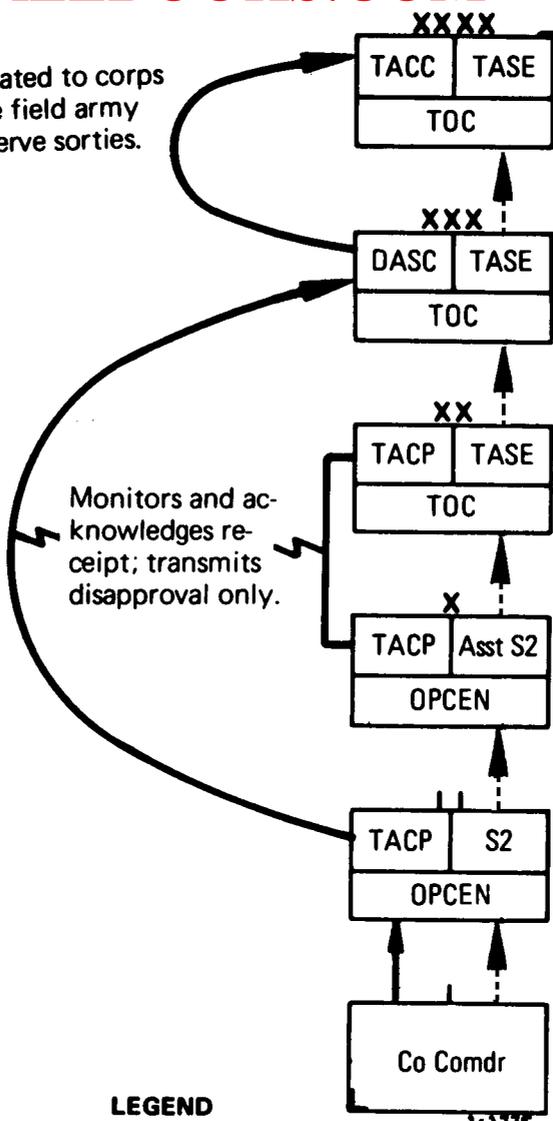
4-10. Target Location and Aircraft Control

Reconnaissance aircraft do not deliver ordnance and, therefore, require less control than CAS aircraft. However, the air control facilities used for CAS aircraft are useful in aiding the air reconnaissance pilot to locate his target. Air reconnaissance aircraft use photoflash cartridges to obtain tactical information during night operations. Since the debris resulting from the use of this equipment can cause injury to friendly troops, caution must be used in discharging the debris over friendly positions.

4-11. Reporting and Dissemination

a. The value of information is increased by its expeditious distribution in usable form to interested agencies. When realtime data link or inflight

If the resources allocated to corps are exceeded and the field army comdr retains no reserve sorties.



Monitors and acknowledges receipt; transmits disapproval only.

LEGEND

- > Preplanned requests.
- > Immediate requests.
- ⚡ Monitors; acknowledges receipt; transmits disapproval only.

NOTE: Each request, preplanned or immediate, is examined to determine whether it is within the capability of Army aircraft. If it is and the request is approved, the G2 at the lowest echelon possessing the required capability tasks an appropriate Army aviation unit to execute the mission. Approval/disapproval is transmitted on the same net that the request is initiated on. When request is approved, mission data accompany the approval.

Figure 4-4. Air reconnaissance request channels.

processing is not used, imagery or other collected data are processed immediately after the aircraft lands. Interpretation follows immediately, and reports are made. When processing Army-requested photography, the Air Force processing facility will be tasked to provide a duplicate negative of

each frame to the military intelligence battalion air-reconnaissance support (MIBARS) for detailed analysis and positive prints as required. Reproduction of selected frames and missions can be accomplished by subsequent duplication from the original negative or the duplicate positive.

b. Inflight reports are normally made to designated elements of the TACS for relay to requesters and interested agencies. These reports consist of significant visual sightings and cockpit display readouts observed during the flight.

c. Immediately after landing, the aircrew makes a debriefing report including a complete summary of the mission. The Army reconnaissance liaison officer normally participates in this debriefing. He immediately forwards derived intelligence information to the requesting unit and the G2 air sections at corps and at field army. The report may be disseminated to other interested agencies and staff sections, as directed.

d. Electronic reconnaissance reports are made either by the aircrew *or by* automatic equipment

to a ground station as soon as necessary information is collected. On completion of the mission this information is included in the mission report (MISREP).

e. Weather reconnaissance reports are made by the aircrew and are relayed to the appropriate command element for use in updating weather forecasts. At aircrew debriefings, a weather officer assists in preparing a weather summary report, which is forwarded to the TACC. The TACC disseminates the weather summary report to higher, adjacent, and subordinate headquarters.

f. FM 30-35 and FM 30-20 contain detailed information on air reconnaissance reporting and dissemination procedures.

Section III. TACTICAL AIRLIFT

4-12. General

a. Tactical airlift is the movement of personnel and material by tactical air force (TAF) aircraft. The Army uses tactical airlift to increase the mobility of its ground combat forces and to provide rapid delivery of supplies and equipment from theater source to user.

b. The apportionment of tactical airlift resources is the responsibility of the theater commander; however, the Army component commander specifies how the sorties allocated to him will be used. Based on recommendations of the Army and Air Force component commanders, the theater commander may reapportion his resources to meet unforeseen requirements.

4-13. Categories of US Air Force Tactical Airlift

Tactical airlift resources may be allocated to the Army or attached to major Army echelons in the field. Airlift resources that are attached to the Army are controlled by the Army commander through communications and facilities that are provided by the Army at each echelon of command. These attached resources are managed and issued directing orders by combat service support organizations at each echelon. All airlift, whether attached or allocated, is categorized as combat support or combat service support according to the mission of the ground force supported.

a. Combat support airlift is the air movement of combat personnel or cargo that has a direct and immediate effect on the accomplishment of a tactical mission, e.g., reinforcement of troops in contact, emergency resupply of troops in contact,

or the movement of troops and equipment with an immediate tactical mission to be executed on arrival at the destination. This type of airlift emphasizes movement in combat-ready formations. Contact with the enemy may occur either on arrival or shortly thereafter. The efficient use of aircraft cargo spaces is sometimes sacrificed for tactical or other considerations. The G3 (S3) has staff supervision of combat support airlift.

b. Combat service support airlift is the air movement of personnel or cargo to support combat or combat support elements in accomplishing the tactical mission; e.g., the movement of replacements, movements of supplies in normal supply channels, or aeromedical evacuation of patients. This type of airlift emphasizes efficient use of aircraft cargo space. Contact with the enemy is remote or improbable at the destination. The G4 (S4) has staff supervision of combat service support airlift.

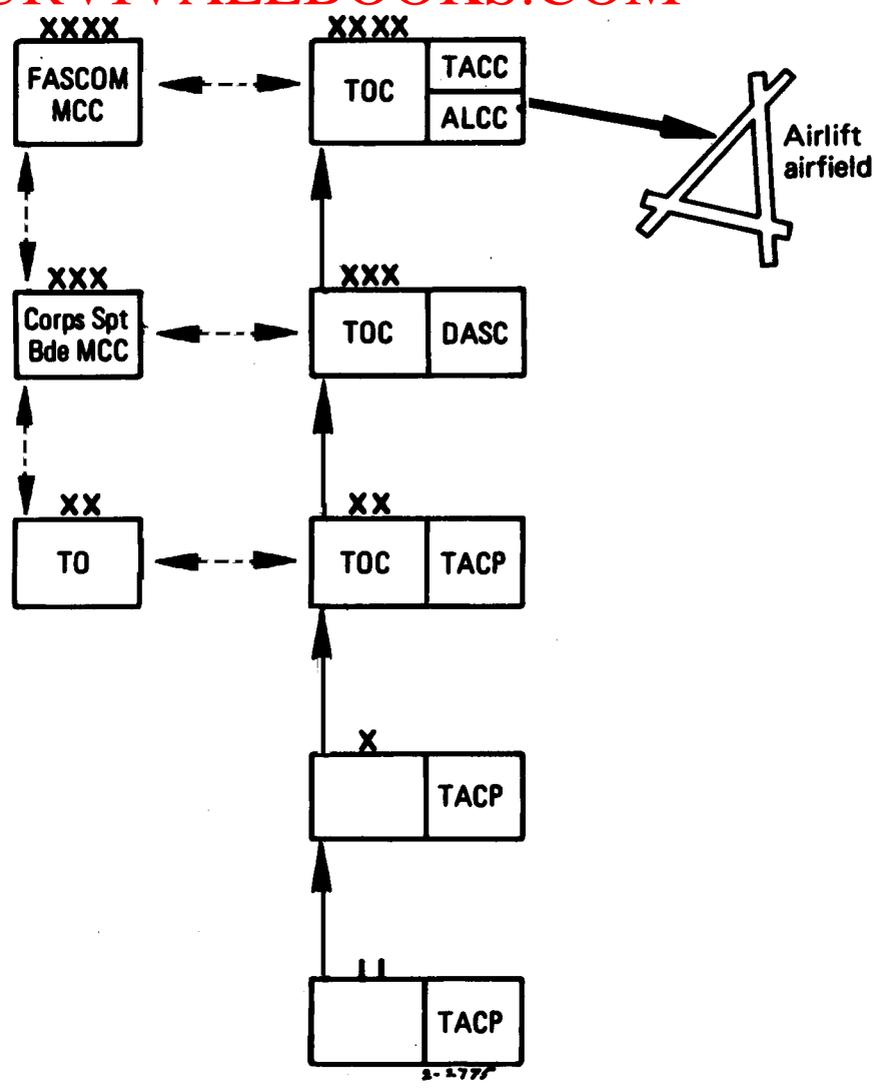
4-14. Tactical Airlift Priorities

a. Priority I is used in an emergency that requires the utmost speed in airlifting personnel or equipment needed in the immediate battle situation to preclude defeat of friendly forces.

b. Priority II is used for the airlift of personnel or equipment that is needed to insure successful accomplishment of the immediate tactical objective.

c. Priority III is used for the airlift of personnel or equipment for employment or use in planned future operations.

d. Priority IV is used for the routine airlift of personnel and equipment.



LEGEND

- Request for airlift of troops, cargo, and supplies.
- Tasking.
- Coordination and information.

NOTE: Requests are satisfied at lowest echelon capable of fulfilling the requester's needs.

Figure 4-5. Preplanned request channel for combat support airlift of troops, cargo, and supplies of Air Force airlift aircraft allocated to the Army.

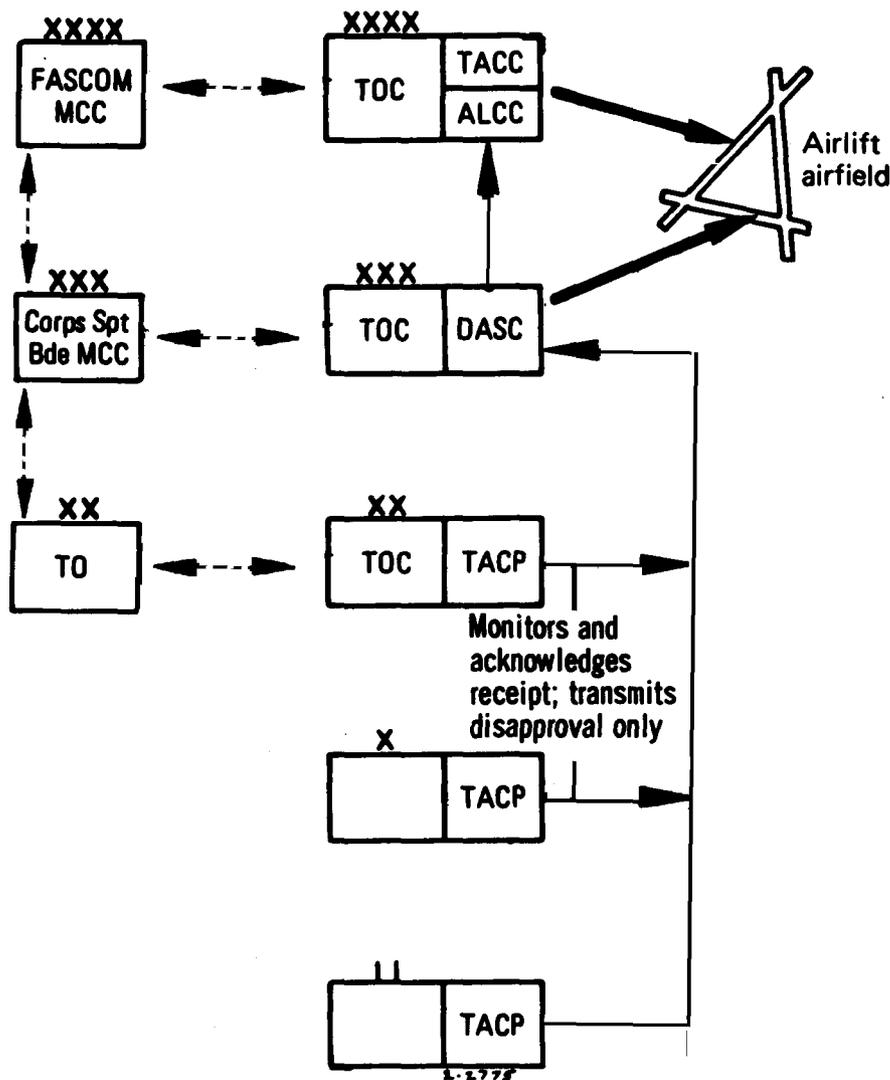
4-15. Tactical Airlift Request Procedures

a. General.

(1) Overall command of tactical airlift forces is exercised by the Air Force component commander (AFCC) through the airlift control center (ALCC). An airlift force commander normally is designated to control all tactical airlift resources assigned to the air component. Detailed

planning, coordination, and tasking for tactical airlift operations are accomplished through the airlift control center (ALCC) subordinate to, but ideally collocated with, the TACC.

(2) Tactical airlift allocated to the Army is specified by a certain number of sorties by type of aircraft, by gross tonnage airlift capability, or a combination of the two.



LEGEND

- Request for airlift of troops, cargo, and supplies.
- Tasking.
- Coordination and information.

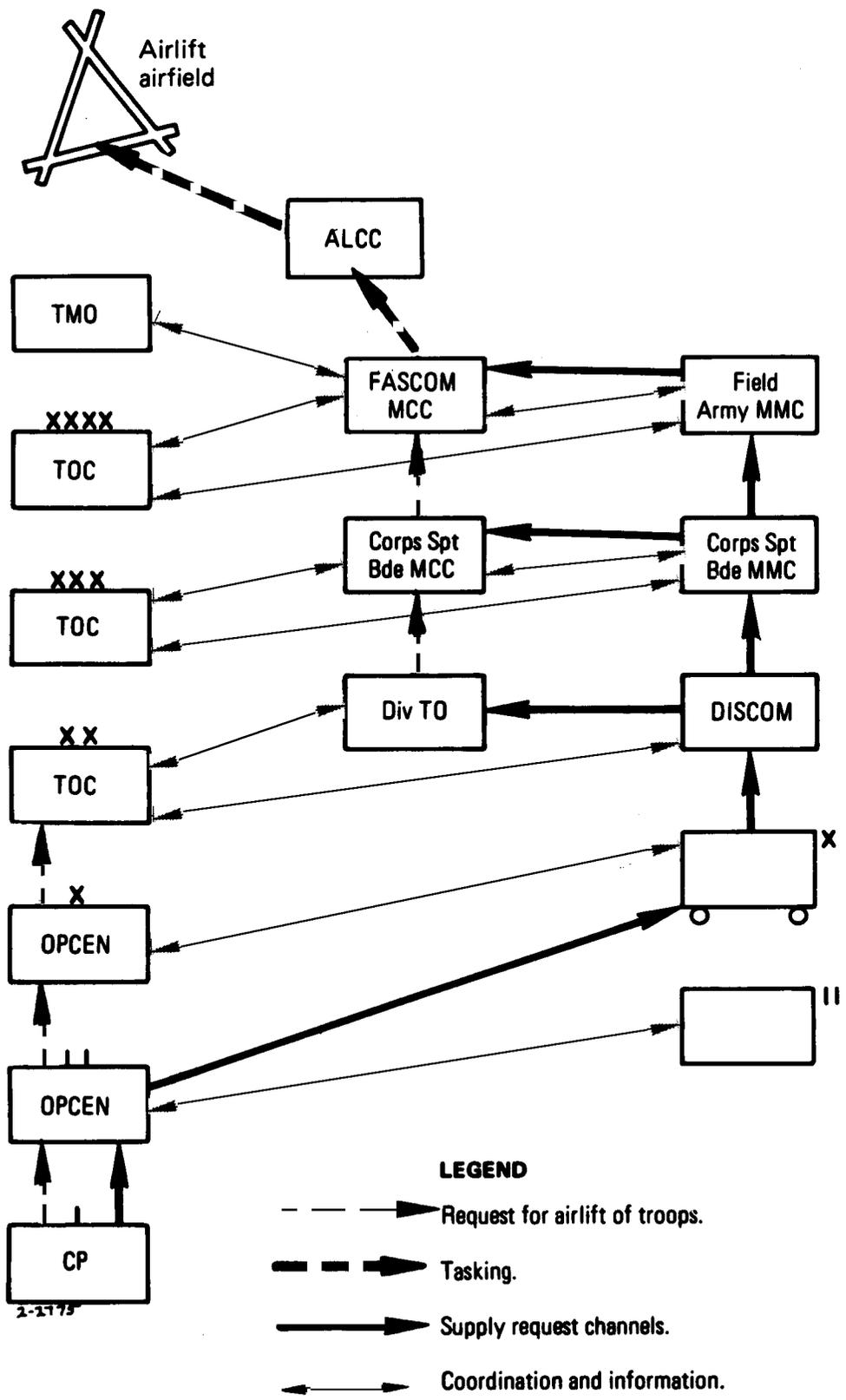
Figure 4-6. Immediate request channel for combat support airlift of troop, cargo, and supplies by Air Force airlift aircraft allocated to the Army.

(3) When time and operational considerations permit planning, airlift requests are considered by the Air Force to be "routine." Routine requests, when approved, are supported by pre-planned missions. Requests considered by the Air Force to be "emergency" in nature are supported by immediate missions.

(4) Movements by combat service support airlift attached to the Army are managed by the field army support command (FASCOM) movement control center (MCC) at field army, the

corps support brigade MCC at corps, and the transportation movements office of the division. In addition, field army and corps MCC position transportation movement officers at critical tactical airlift points throughout the field army and corps areas to assist in regulating the movement of personnel and cargo through these points.

Note. When patient evacuation means are required, other than those discussed in paragraphs 4-16 through 4-22 and paragraph 6-16, the medical command medical regulating officer (MRO) submits patient evacuation re-



2-2173

LEGEND

- - - - -> Request for airlift of troops.
- · - · -> Tasking.
- > Supply request channels.
- ←————> Coordination and information.

NOTE: Requests are satisfied at lowest echelon capable of fulfilling the requester's needs.

Figure 4-7. Request channel for combat service support airlift of troops, cargo, and supplies by Air Force airlift aircraft attached to the Army.

quests to the MCC. The MCC will provide coordination for the use of nonmedical Army aircraft or locomotive power, railway movement schedules, and maintenance personnel for the Army Medical Department's (AMEDD) ambulance trains.

b. Request Procedures for Allocated Air Force Airlift Aircraft.

(1) Preplanned requests for combat support airlift allocated to the Army are processed through Army operational channels to the echelon having directive authority. The approved request will be forwarded to the ALCC for execution of the mission. Normally, the field army will have the airlift to fulfill the request. At each level, the request is coordinated with the transportation office (TO) or MCC, as appropriate. Figure 4-5 illustrates the preplanned request channel for combat support airlift missions by Air Force aircraft allocated to the Army.

(2) Immediate requests for combat support airlift are processed through the same channels and in the same manner as GAS request except that the TO is included in the coordination at each echelon. Figure 4-6 illustrates the immediate request channel for combat support airlift missions by Air Force aircraft allocated to the Army.

(3) Both preplanned and immediate requests for combat service support airlift allocated to the Army may originate at any level and will be processed through Army operational channels to the command exercising directive authority who will task the airlift unit to execute the mission (fig 4-5).

c. Request Procedures for Attached Air Force Airlift Aircraft.

(1) Preplanned and immediate requests for combat support airlift attached to the Army may originate at any level and will be processed through operational channels. The command exercising operational control (OPCON) issues a directing order to the Air Force airlift unit to execute the mission. Normally the Air Force

retains operational control of airlift aircraft attached to the Army. Under certain circumstances, and upon direction of the joint force commander, airlift aircraft may be attached to the Army in accordance with provisions of FM 100-27/AFM 2-50. The order directing the attachment will set forth the limitations of the attachments. All airlift, whether attached or allocated, is categorized as combat support or combat service support according to the mission of the ground force supported,

(2) Preplanned and immediate requests for combat service support airlift attached to the Army may originate at any level. At battalion and brigade, they are processed through operational channels. From this point, the request for transportation is processed in movement channels through the TO at division and the MCC at the corps support brigade and FASCOM. In the case of airlift of cargo or supplies, the request for supplies will be processed through materiel channels at each combat service support echelon until the requested item is located. The materiel management center (MMC) or, for medical items, the inventory control center (ICC) places a request for movement of the item from the stock point to the consumer. Both the request for transportation and the request for supplies are coordinated with the TOC at each echelon. The FASCOM MCC, normally the approving authority, will forward the approved request to the ALCC for execution of the mission. Figure 4-7 illustrates the request channel for combat service support missions by Air Force aircraft attached to the Army.

d. Other Request Procedures. FM 100-27/AFM 2-50 contains additional information on tactical airlift procedures including attachment of airlift forces to Army organizations; movement of personnel, equipment, and supplies by theater army commands; and the logistic organization for the conduct of tactical airlift operations.

Section IV. TACTICAL AIR FORCE AEROMEDICAL EVACUATION

4-16. General

a. It is the policy of the Department of Defense that in both peace and war the movement of patients of the Armed Forces shall be accomplished by airlift when available, and conditions are suitable for aeromedical evacuation, unless medically inadvisable.

b. Tactical aeromedical evacuation is provided by the Air Force commander for moving patients,

normally over long distances, from airheads in forward areas to rear area treatment facilities, e.g., from the field army to the communications zone (COMMZ). All tactical airlift in a TAF can be configured for litter and ambulatory patients.

c. The Air Force component commander is responsible for Air Force aeromedical evacuation. This task is normally delegated to the airlift force commander who uses assigned aeromedical evacu-

ation aircraft augmented by airlift aircraft returning from flights into forward areas.

4-17. Organization and Function of the Tactical Aeromedical Evacuation System

A tactical aeromedical evacuation system will vary in size and complexity, depending upon anticipated patient workloads, size and location of ground force medical treatment facilities in objective areas, location of airheads, airlift capability and other factors which must be evaluated to determine the resources required. Normally, a tactical aeromedical evacuation system will include the following elements:

a. The commander who operates under the direct supervision of the airlift force commander is normally designated the aeromedical evacuation control officer.

b. An aeromedical evacuation control center.

c. Forward and rear aeromedical staging facilities.

d. Inflight aeromedical evacuation teams.

e. Aeromedical evacuation liaison officers and liaison teams.

4-18. Aeromedical Evacuation Control Center

The aeromedical evacuation control officer and aeromedical evacuation control center are normally located in the airlift control center. The number of assigned personnel is variable depending upon the size of the system and requirements for 24-hour manning. The functions of this element are to control and monitor patient movement, schedule movement of patients by classification (litter or ambulatory), select tactical aircraft that are used for movement of personnel and equipment into assault landing zones, provide information and guidance to all elements of the system, maintain statistical data, and provide patient status information as necessary.

4-19. Aeromedical Staging Facilities

Aeromedical staging facilities (ASF) are air-mobile units equipped and staffed to receive, process and load patients. Normal capacity is 50 patients with the holding time not exceeding 3

hours. These facilities perform their mission both at the forward as well as rear area airfields. The functions of an ASF are to receive and process patients for aeromedical evacuation, provide emergency treatment, prepare patient manifests, load patients aboard aircraft, assist flight crews in configuration of aircraft, and maintain communications with other elements of the system and appropriate ground forces medical facilities.

4-20. Aeromedical Evacuation Liaison Officers and Liaison Teams

Aeromedical evacuation liaison officers (AELO) and liaison teams are attached to Army medical groups, the field army medical brigade, hospital centers, and the COMMZ medical command. At these headquarters, they coordinate the processing of an evacuation request with the medical regulating officer. This coordination provides an interface with the Army's medical regulating system.

4-21. Command and Control

Command and control is exercised through separate communications circuits established between the aeromedical evacuation control center (AECC) and all principal elements of a tactical aeromedical evacuation system. Single sideband shortwave radios are used for direct communications between the aeromedical evacuation control center, forward ASF, and liaison teams. Radio contact is also maintained between AECC, support teams at staging bases, and rear area aeromedical evacuation liaison officers. These circuits are essential to report and coordinate the variety of aeromedical evacuation information.

4-22. Request Procedures for Tactical Air Force Aeromedical Evacuation

The flow of a patient evacuation request follows the Army's medical chain of command from the initiating hospital back to the COMMZ medical command MRO. The request is made through parallel channels (US Army and US Air Force) passing from medical regulating officers and aeromedical evacuation liaison officers at each command level to the next higher headquarters. This is necessary to insure that all requirements for patient preparation and movement are met.

CHAPTER 5

ORGANIZATION OF THE AIR-GROUND OPERATIONS SYSTEM

Section 1. INTRODUCTION

5-1. General

The air-ground operations system (AGOS) includes the personnel, equipment procedures, and techniques comprising the Army air-ground system (AAGS) and the tactical air control system (TACS) of the Air Force. This system provides the means to initiate, receive, process, and execute requests for air support and to disseminate information and intelligence produced by air means. Although the components and agencies of the AGOS belong to different services and sometimes to different nations, they function as a single entity in planning, coordinating, and integrating air support operations with ground operations.

5-2. Joint and Combined Force Organization

a. Joint forces are comprised of significant elements of two or more services. They are identified as unified and subordinate unified commands and joint task forces (JTF). The principal doctrine and functions for the organization and command of joint forces are set forth in JCS Pub 2.

b. Combined forces are comprised of services from two or more nations. Combined forces may be organized by national component, by functional component, or by a combination of these. Organization and command of combined forces are established by international agreement. FM 100-15 contains guidance on the organization and command of combined forces.

5-3. Responsibilities for Air Support

a. The US Air Force is responsible for providing fixed-wing tactical air support to Army forces. Tactical air forces (TAF), consisting of tactical fighter, reconnaissance, and airlift units, with

necessary support units, are employed in support of each field army. The size and the type of the TAF are determined by the joint force commander based on the mission, the enemy threat, the geographic area of responsibility, the availability of forces, and the role of the particular area command in the national strategy. In addition to providing support throughout the field army area of responsibility, the supporting Air Force forces can organize composite airstrike forces to support subordinate commands of the field army assigned independent or separate missions.

b. Circumstances may require that the Navy or Marine Corps has responsibility for providing all or part of the tactical air support for Army forces, e.g., during amphibious operations. Under these conditions, the Navy component commander normally attaches a Fleet Marine Force air/naval gunfire liaison platoon to a separate US Army brigade. This platoon also forms the nucleus for expansion to an air/naval gunfire liaison company (ANGLICO) if required to provide support to a US Army or Allied division, and, in the case of dual service air support responsibility, to operations of the US Air Force.

c. Army aviation units are part of the forces organic to the Army component commander to execute the ground combat portion of the joint force mission. Therefore, even though Army aviation units conduct air support operations, they do this as an element of the Army component rather than as tactical air support resources. The joint force commander may assign the Army component tasks that require the use of Army aviation; however, he does not include Army aviation in his apportionment of tactical air resources to accomplish the air combat functions.

Section II. THE ARMY AIR-GROUND SYSTEM (AAGS)

5-4 General

a. The AAGS begins at field army and extends through all echelons down to maneuver battalion. This system is used for coordinating and integrating both Army aviation support and tactical air support with Army ground operations. It also provides for exchange of intelligence and other information between joint force components at each echelon. The G3 (S3) is responsible for general staff supervision of all air-ground operations except combat service support airlift, which is the responsibility of the G4 (S4), and air reconnaissance and surveillance, which is the responsibility of the G2 (S2).

b. The AAGS includes liaison, operations, intelligence, and combat service support personnel and facilities.

(1) Liaison personnel and facilities are—

(a) The Army liaison element (ALE) at the tactical air control center (TACC). This liaison element, including its equipment, normally is provided from the field army G2 and G3 sections and appropriate subordinate organizations. Representatives for all aspects of tactical air operations are provided, to include command and control, close air support (CAS), air reconnaissance, airlift, air defense, and air traffic regulation.

(b) Army air defense and Army aviation representatives at the Air Force control and reporting center (CRC). These personnel are provided from field army air defense and aviation organizations.

(c) Ground liaison officers (GLO) at the senior tactical fighter unit and at each tactical fighter base. These officers are provided from the field army G3 section.

(d) Liaison and imagery interpretation personnel of the Military Intelligence Detachment, Air Reconnaissance Support (MIDARS). These detachments are organic to the MIBARS. One detachment is deployed with each squadron of the supporting tactical air reconnaissance wing. Each detachment is assigned an air reconnaissance liaison officer (ARLO), who provides liaison with the field army. A senior ARLO normally is provided to the reconnaissance wing headquarters.

(e) Transportation movements officers at each tactical airlift base and at the senior airlift control center. The field army support command (FASCOM) provides these officers and their equipment.

Note. Army representation is not habitually required in the direct air support center (DASC), since it normally is collected with the corps tactical operations center (CTOC). When the level of tactical air operations is such that the Air Force does not constitute a tactical air control center and substitutes a direct air support center, Army representation appropriate to the demand is required. Other exceptions may occur when an airborne DASC is employed to support airborne, air-mobile, or amphibious assault operations.

(2) Operations personnel and facilities are—

(a) The G3 air (S3 air) at each echelon from field army through maneuver battalions to include the separate brigade and armored cavalry regiment at corps. G3 air (S3 air) are located in the tactical air support element (TASE) of the tactical operations center (TOC) at division and above and in the fire support coordination center (FSCC) at brigade and battalion.

(b) The fire support coordinator (FSCOORD) at each echelon from field army to maneuver battalion. At division and above, the FSCOORD is located in the fire support element (FSE) of the TOC. At brigade and battalion, he is located in the FSCC.

(c) The aviation officer at field army, corps, and division. The aviation officer is located with the G3 element in the TOC. Below division, his functions are performed by the commander or a representative of the assigned, attached, or supporting aviation unit.

(d) Army aviation and air defense artillery (ADA) representatives located in the airspace control element (ACE) of the TOC at field army, corps, and division. Below division, their functions are performed by the commander or a representative of the assigned, attached, or supporting aviation and ADA unit. Personnel may be formed into a brigade airspace control element (BACE) operating from the supported unit's operations center.

(3) Intelligence personnel and facilities are—

(a) The G2 air (S2/S2 air) at each echelon from field army to maneuver battalion. These personnel are located in the TASE of the TOC at division and above and in the staff sections at brigade and battalion.

(b) Field artillery intelligence officers organic to each FSE.

(c) Operations and intelligence personnel and facilities of the MIBARS (TOE 30-5). The headquarters of this unit is located near the field army command post.

(d) Personnel of the MI company (aerial surveillance). This company normally is assigned to and employed in general support (GS) of corps and is located at the corps instrumented airfield. Direct support (DS) of corps subordinate units is provided when required. This company does not have an inflight data transmission capability.

(e) The surveillance airplane company is assigned to a corps, field army, or separate task force. While normally assigned in GS of a corps, it may be employed in DS of subordinate units. The company performs surveillance, reconnaissance, and target acquisition missions. This company has an inflight data transmission capability. It normally is located at an instrumented airfield.

(4) Combat service support personnel and facilities are-

(a) The assistant chief of staff (ACofS), movements, at field army and corps support commands (FASCOM and CO SCOM) ; the transportation staff officer at division; and the S4 at brigade and battalion.

(b) Movement control centers (MCC) of the FASCOM and COSCOM. The MCC are centrally located in the area of the organization served.

(5) Except in scope and magnitude, the responsibilities and functions of a component of the AAGS are the same at each echelon; e.g., the responsibilities of the S3 air at maneuver battalion and the field army G3 air are essentially the same. The duties of principal individuals in the AGOS are described by combat air tasks in succeeding paragraphs.

5-5. Close Air Support

a. The G3 air (S3 air)—

(1) Advises on capabilities, recommends employment of CAS resources, approves or disapproves requests within delegated staff authority, and insures integration of all CAS with the ground tactical plan,

(2) Develops planning requirements for CAS including those of organic and attached subordinate elements.

(3) Receives allocations of GAS resources; coordinates suballocation of fixed-wing resources to meet preplanned and immediate mission requirements; requests additional support from Army tactical air support sources, when required; and coordinates adjustment of suballocations when required.

(4) Receives, reviews, and coordinates ap-

proval of preplanned CAS requests and develops priorities for approved requests.

(5) Receives, reviews, and coordinates approval or requests for immediate CAS; and coordinates approval with ACE and FSE.

(6) In conjunction with the FSCOORD, initiates requests for immediate and preplanned CAS.

(7) Maintains current status of GAS available to the command.

(8) Recommends to the FSCOORD when appropriate the location or changes in the fire support coordination line (FSCL).

(9) Advises the tactical air control party (TACP) of the ground tactical situation, the location of friendly units, restrictive fire plans, the location of FSCL, and other matters of importance to the conduct of CAS missions.

(10) Coordinates recommendations for air interdiction of targets with fire support agencies and TASE.

(11) Maintains close coordination with the GLO and informs them of Army mission data on all GAS requests. Informs GLO of current tactical situation and is the GLO net control station at field army.

(12) Prepares the air fire support appendix to the fire support annex to operation plans and operation orders.

b. The fire support coordinator (FSCOORD), fire support element (FSE), fire support coordination center (FSCC)—

(1) Advises on capabilities, recommends employment of fire support resources; provides command coordination of all fire support used against surface targets; and insures that fire support from aerial field artillery elements is integrated into the fire support plan.

(2) Provides planning information on fixed-wing CAS to G3 air for development of apportionment recommendations.

(3) Reviews allocation of fixed-wing resources and recommends suballocation.

(4) Reviews all requests for fire support from subordinate units; evaluates requests in light of other requirements; makes decisions within delegated authority to furnish requested support, substitutes other types of support, or recommends disapproval of request.

(5) Obtains target information from G2 and other intelligence sources and insures attack of targets by the most appropriate means.

(6) Receives, reviews, and coordinates ap-

approval of requests for aerial field artillery fires; tasks aerial field artillery units to execute approved request.

(7) Maintains current status information on fire support available to the command.

(8) Monitors execution of all fire support missions to determine adequacy of mission accomplishment and coordinates post-strike damage assessment with the TACP and the G2 air.

(9) Recommends, and after maneuver commander's approval, implements fire support coordination measures at his echelon; and maintains status of coordination and control measures or other restrictive fire measures established by adjacent and higher commands.

(10) Coordinates with the airspace control element, the tactical air control party, and the G3 air on field artillery requirements for use of airspace and keeps all elements informed on status of planned special ammunition fires.

(11) Recommends targets for attack by air-delivered special ammunition fires and recommends air interdiction targets.

(12) Operates in the appropriate field artillery command and fire direction nets.

(13) Prepares fire support annex to OPLAN and OPORD and insures that all fire support resources are integrated by reviewing and approving component plans (e.g., field artillery, air, naval gunfire, and special weapon).

c. The aviation officer—

(1) Advises on capabilities and recommends employment of attack helicopter resources (less aerial field artillery).

(2) Provides information to C3 air and the FSCoord for development of attack helicopter resources; coordinates with G3 and FSCoord on priorities of commitment and allocations to subordinate units; and insures that aviation units placed in support of subordinate units are positioned as requested by supported commanders or as the situation requires.

(3) Maintains current status information on availability of close air support assets and condition and availability of firing systems and ammunition (less aerial field artillery).

(4) Advises Army aviation commanders of ground tactical situation, location of friendly units, restrictive fire plans, location of the FSCL, and other matters of importance to the conduct of attack helicopter missions; and coordinates the use of the airspace with the air defense elements, the TACP, and the FSCoord.

(5) Operates station in the aviation operations nets.

(6) Provides planning information on G3 air for preparation of air support plans and prepares Army aviation annex to OPLAN and OPORD.

(7) Coordinates with the airspace control element, the fire support coordinator, and the G3 air on the overall use of airspace.

d. The airspace control element (ACE)—

(1) Coordinates the use of airspace in accordance with directives from higher headquarters and the commander's concept for use of airspace by organic forces; in conjunction with the FSE and TASE, determines how airspace requirements can best be met, submits recommendations to the G3, and issues necessary instructions.

(2) Coordinates Army air defense with other combat and combat support operations, makes continuous estimate of the air defense situation, and recommends allocation and employment of air defense means. Provides information on the air defense situation, including coverage, to other elements; and disseminates rules of engagement, minimum normal burst altitude, critical ammunition shortages, and capability for attack of surface targets. When air defense nuclear weapons are used, the ACE notifies the other elements including the air defense element in the Air Force control and reporting center, and obtains and disseminates post-strike data, including time, location, and height of burst.

(3) Coordinates Army air traffic operations; determines prohibited or restricted areas or other restrictions imposed on air traffic by the commander, higher headquarters, or theater commander or through agreement with other services; disseminates aviation control guidance (e.g., corridors, altitudes, areas in which all flights must be cleared); provides information for the preparation of the air traffic regulation plan to be included in the airspace utilization annex; and coordinates the plan. On G3's approval, the ACE disseminates the plan to the Air Force and the Army aviation and air defense units as required. Through liaison with other tactical operation center elements, determines those combat and combat support activities that will influence air traffic and disseminates changes to the air traffic control plan as required.

(4) Operates station in the aviation, air defense and operations nets.

(5) Provides planning information to G3 air for preparation of air fire support plans and prepares airspace utilization annex to OPLAN and OPORD when a staff element outside the TOC has not prepared it.

e. The Army liaison element (ALE) normally located at the tactical air control center—

(1) Represents field army and corps commanders on tactical air support matters and keeps them informed of Air Force matters affecting the tactical air support mission.

(2) Advises and assists the TAF unit commander and staff on matters pertaining to Army operations.

(3) Assists in processing Army requests for CAS.

(4) Coordinates nuclear targeting.

(5) Coordinates Army plans for CAS with the Air Force component.

(6) Coordinates Army air defense and air traffic regulation matters with the Air Force component.

(7) Keeps the tactical air unit staff informed of the ground tactical situation.

f. The ground liaison officer (GLO)—

(1) Advises and assists tactical fighter unit commanders on matters pertaining to Army operations.

(2) Maintains current ground tactical situation maps and keeps the tactical air unit staff and aircrews informed of the ground tactical situation, such as location of friendly positions, location of FSCL, friendly identification procedures, and current restrictive measures.

(3) Assists in briefing and debriefing of fighter aircrews and reports information obtained to field army G3 air.

(4) Coordinates delivery of Air Force special ammunition fires allocated to the Army.

(5) Coordinates Army plans for CAS with the tactical fighter unit.

5-6. Air Reconnaissance

a. The G2 air (S2 air)—

(1) Advises the G2 air/S2 air on capabilities; recommends reconnaissance resources; and insures that air reconnaissance operations are integrated into intelligence collection and ground tactical plans.

(2) Prepares the air surveillance and reconnaissance standing operating procedure.

(3) Develops fixed-wing apportionment planning requirements for air reconnaissance including requirements of subordinate elements.

(4) Receives allocation of air reconnaissance resources; coordinates suballocation of resources to meet preplanned and immediate mission re-

quirements; requests additional support from Army or Air Force sources, when required; and coordinates adjustment of suballocation with the Army aviation officer, the TACP, and subordinate elements, when required.

(5) Receives, reviews, and, within delegated authority, approves requests for preplanned air reconnaissance; and develops priorities for approved requests.

(6) Receives, reviews, and coordinates approval of requests for immediate air reconnaissance with ACE and FSE.

(7) Initiates requests for immediate and preplanned air reconnaissance.

(8) Maintains current status of air reconnaissance support available to the command.

(9) Provides staff supervision of organic, attached, or supporting air reconnaissance units or personnel and coordinates and supervises the execution of air reconnaissance missions flown by these units.

(10) Provides staff supervision of the MIBARS, its detachments and air reconnaissance liaison officer, and informs them of the current tactical situation.

(11) Provides briefing and debriefing of Army aviation pilots and aircrews on completion of air reconnaissance mission.

(12) Provides intelligence information on enemy activities affecting the air mission to supporting Army aviation and the TACP.

(13) Disseminates intelligence information gained through air reconnaissance and pilot reports and supervises imagery interpretation within the command. Information on targets warranting immediate attack is forwarded to the fire support element as rapidly as possible.

(14) Prepares air reconnaissance appendix to the intelligence annex to OPLAN and OPORD.

b. The aviation officer—

(1) Advises on capabilities and recommends employment of Army aviation air reconnaissance resources.

(2) Coordinates allocation of organic, attached, and Army air reconnaissance resources and insures that aviation resources placed in direct support or general support are positioned as requested by supported commander or as the situation requires.

(3) Maintains current status information on Army aviation availability and availability of ancillary equipment, such as, communications navigation, sensor systems, and related aviation equipment.

(4) Provides planning information for development of air reconnaissance plans and insures that Army air reconnaissance requirements are included in Army aviation annexes to OPLAN and OPORD.

c. The fire support coordinator (FSCoord), fire support element (FSE), fire support coordination center (FSCC)—

(1) Provides planning information to the G2 air on target acquisition requirements for development of apportionment recommendations.

(2) Provides for suppressive fires when required.

(3) Maintains current status information on conventional and special weapon fires and coordinates post-strike damage assessment with the G2 air and the aviation officer or the TACP.

(4) Insures that target acquisition requirements, conventional fire plans, special weapon fire plans and suppressive fire requirements are considered in air reconnaissance plans.

(5) Receives target information from G2 air and requests fire from appropriate artillery units on targets that require immediate attack.

d. The airspace control element (ACE)—

(1) Provides intelligence information obtained through air defense and Army aviation channels to the G2.

(2) Disseminates intelligence information on local enemy activities to Army air defense and aviation units.

(3) Provides planning information for development of air reconnaissance plans and insures that Army air reconnaissance requirements are included in the airspace utilization annexes to OPLAN and OPORD.

e. The army liaison element (ALE) located at the tactical air control center—

(1) Represents the field army and corps commanders on tactical air reconnaissance matters and keeps them informed of Air Force matters affecting the tactical air reconnaissance mission.

(2) Advises and assists the tactical air force unit commander and staff on Army matters affecting the tactical air reconnaissance mission.

(3) Provides assistance in processing tactical air reconnaissance requests.

(4) Provides detailed information and coordination on tactical air reconnaissance missions.

(5) Keeps the TACC informed on the essential elements of information (EEI), mission results desired, reports and imagery desired, and other information required.

f. The Army reconnaissance liaison officer (ARLO) of the MIBARS—

(1) Maintains current air reconnaissance and ground tactical situation maps.

(2) Advises and assists tactical air reconnaissance squadron commanders on Army matters concerning air reconnaissance such as detailed explanation of mission results desired, EEI, friendly troop disposition, location of fire support coordination line, friendly identification markings, and information on friendly restrictive measures.

(3) Assists in briefing and debriefing air reconnaissance pilots and aircrews and provides reports of information obtained by the MIBARS.

5-7. Airlift

a. The ACofS, movements (G4, movement control center)—

(1) Advises on capabilities and recommends employment of organic, attached, and supporting airlift resources.

(2) Develops planning requirements for airlift, including requirements of subordinate elements.

(3) Receives allocation of airlift resources; coordinates suballocation of resources to meet preplanned and immediate requirements; requests additional support from Army aviation and Air Force sources, when required; and coordinates adjustment of suballocation with Army aviation officer, the TACP, and subordinate elements, when required.

(4) Receives, reviews, and coordinates approval of preplanned airlift support requests and develops priorities for approved requests.

(5) Receives, reviews, and coordinates approval with the airspace control element and fire support element and approves requests for immediate airlift support.

(6) Initiates requests for immediate and preplanned airlift support.

(7) Maintains current status of airlift support available to the command.

(8) Coordinates and supervises the execution of airlift support missions flown by organic, attached, or supporting Army aviation units.

(9) Plans and coordinates supply and management services incident to airlift operations.

(10) Informs supporting Army aviation and Air Force organization on the location of logistic installations and provides other combat service support information, as required.

(11) Provides staff supervision of airlift liaison officers and transportation movements officers.

(12) Prepares airlift portion of movement annex to OPLAN and OPORD.

b. The aviation officer—

(1) Advises on capabilities and recommends employment of Army airlift resources.

(2) Provides information to the transportation officer for development of movement recommendations.

(3) Coordinates mission tasking of organic, attached, and supporting Army airlift resources and insures that aviation resources placed in DS or GS are positioned as requested by supported commanders or as the situation requires.

(4) Receives, reviews, and coordinates requests for Army airlift; tasks subordinate aviation units to execute requirements approved for Army aviation; and requests assistance from next higher echelon when requirements exceed capabilities.

(5) Maintains current status information on Army aviation capability, configuration, and availability.

(6) Monitors performance of Army airlift operations to insure adequate mission performance and coordinates airspace utilization with the FSCoord, ACE, the TACP, and other staff elements concerned.

(7) Coordinates briefing and debriefing of pilots before and after missions.

(8) Disseminates information on logistic installations and other combat service support to Army aviation units.

(9) Provides information for development of

movement plans and insures that airlift requirements are included in Army aviation annexes to OPLAN and OPORD.

c. The fire support coordinator (FSCoord), fire support element (FSE), fire support coordination center (FSCC)—

(1) Coordinates with the airspace control element (ACE) and tactical air control party (TACP) to insure that use is made of available artillery fires in support of airmobile operations in conjunction with tactical air control and Army aviation support units.

(2) Monitors pilot debriefings to obtain target intelligence information.

(3) Provides information on fire plans, suppressive fire requirements, and residual special weapon hazards for consideration in air movement plans.

d. The ACE provides airspace control information relevant to development of air movement plans and insures that airlift requirements for use of airspace are included in airspace utilization annexes to operation plans and operation orders.

e. The transportation movements officer—

(1) Maintains current airlift situation information and advises MCC of Air Force matters affecting airlift situation.

(2) Advises Air Force airlift commander and staff on Army requirements, priorities, and other matters affecting the airlift situation.

(3) Serves as principal point of contact between Air Force and Army for coordinating movement of Army personnel and cargo.

(4) Provides on site movement management of Army personnel and cargo at Air Force air terminals and transfer points.

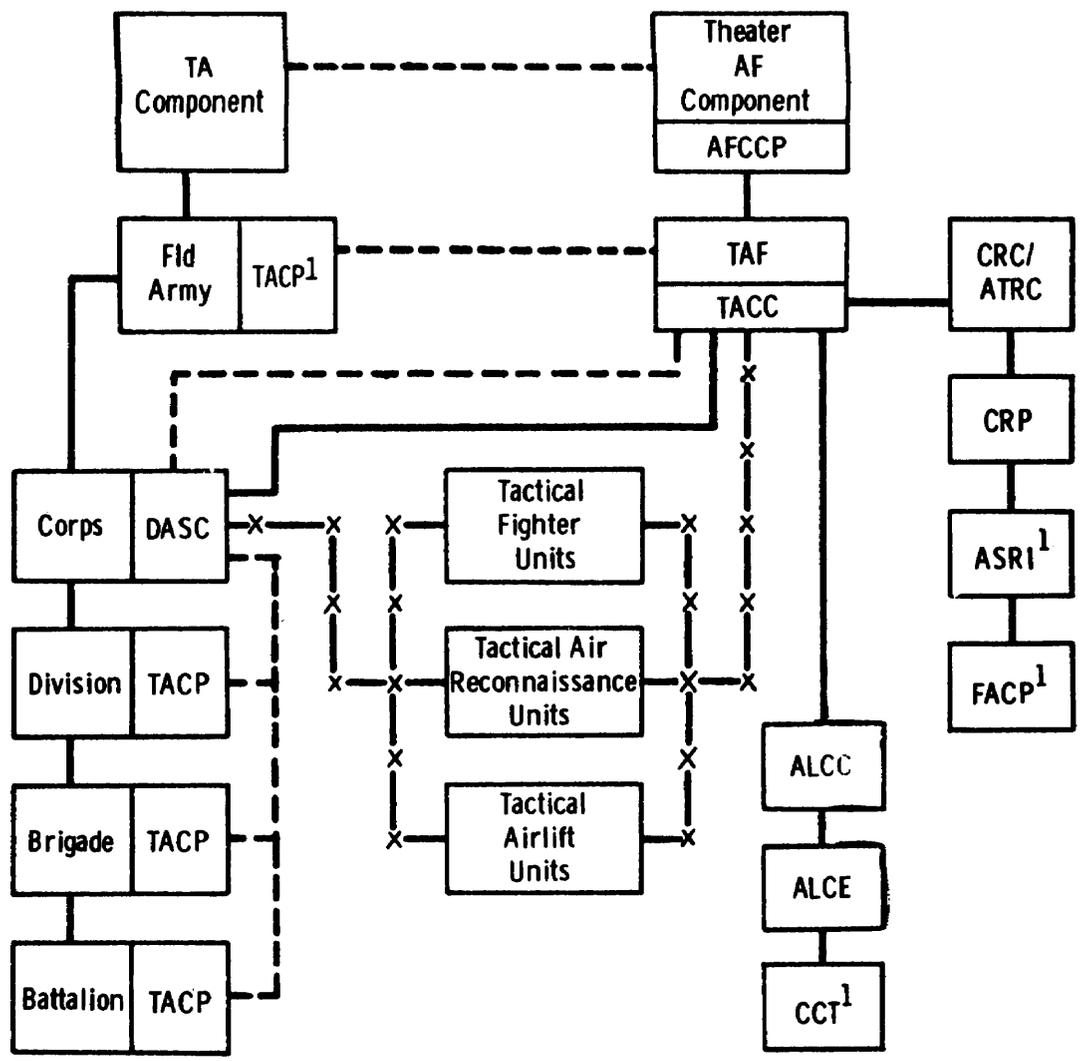
Section III. THE AIR FORCE TACTICAL AIR CONTROL SYSTEM

5-8. General

a. The Air Force tactical air control system (TACS) begins at the Air Force component command level and extends through all operating echelons. It is a system of personnel, facilities, sensors, and communications through which the Air Force component commander (AFCC) plans, coordinates, and directs the resources available to him for the conduct of tactical air operations. This system also provides the organization and equipment necessary to coordinate Air Force operations with other service components.

b. The various agencies of the TACS are described in succeeding paragraphs by functional groups: command and control of Air Force elements; command and control of tactical air operations; and air traffic control and direction; and air weather information service.

c. Figure 5-1 illustrates the components of a typical Air Force TACS and the Army command level at which each component is located. The system may be modified by additional elements, or existing elements may be reinforced to support independent or separate Army operations.



LEGEND

- Command.
- - - - - Coordination and requirements.
- x—x— Tasking.

¹Employed when operational or tactical requirements dictate.

Figure 5-1. Components of the Air Force tactical air control system

5-9. Command and Control

a. *Air Force Component Command Post.* The Air Force component command post (AFCCP) is the senior Air Force headquarters in the theater. The AFCCP plans, directs, controls, and coordinates the full range of tactical air operations and support.

b. *Airborne Battlefield Command Control Center.* The airborne battlefield command control cen-

ter is a specially equipped transport aircraft used by the Air Force component commander (AFCC) during deployments for en route and interim terminal control of his forces. After the AFCCP is established and operational, the airborne facility remains available to the commander for use as the situation requires. It may also be used as an airborne direct air support center, as described in paragraph 5-10C.

5-10. Tactical Air Operations Agencies

a. Tactical Air Control Center (TACC).

(1) The TACC is the operations center of the Air Force component and is equivalent to the senior Army tactical operations center. Communications are provided with higher and adjacent headquarters, subordinate units, and agencies of the tactical air control system collocated with Army units. Army liaison elements are located at the tactical air control center to facilitate coordination of air-ground operations.

(2) The TACC prepares the daily air operations combat plan and directs current weapon employment. Specifically, the TACC—

(a) Provides centralized control and direction of tactical air operations.

(b) Plans and monitors current tactical air operations.

(c) Provides tactical air support sorties to Army forces based on the apportionment decision of the joint force commander and the recommendations made by the field army commander.

(d) Allocates and directs Air Force effort for air defense operations, but normally decentralizes execution of the air defense task to the CRC.

(e) Plans and directs counterair operations.

(f) Plans and directs air interdiction operations.

(g) Commits preplanned tactical air support sorties to meet Army requirements.

(h) Provides advance echelon or alternate air force component command posts, when required.

(i) Maintains communications with the joint force headquarters; Army component headquarters; direct air support center; airlift control center (ALCC); tactical air units; control and reporting center; and, when applicable, combined operation facilities.

(j) Implements policies and procedures for traffic control.

(k) Through the tactical air control center weather team, provides direct support to the Air Force component command post and weather information over tactical communications circuits to support the control and reporting center/air traffic regulation center (ATRC), control and reporting post (CRP), direct air support center, airlift control center, tactical air units, and Army forces.

(3) When operating with North Atlantic Treaty Organization (NATO) forces, the tactical

air control center may be referred to as the joint operations center (JOC).

b. Direct Air Support Center (DASC).

(1) The DASC is a mobile, air-transportable facility designed to operate with a corps tactical operations center or an independent division tactical operations center. It functions as a forward element of the tactical air control center (TACC) in the operational command channels of the tactical air control system (TACS). The primary task of the direct air support center (DASC) is to provide a fast-reaction capability to satisfy immediate requests from Army forces for tactical air support. Since the DASC is collocated with the supported unit tactical operations center, Army liaison normally is not required.

(2) A tactical air control party may be designated to perform the DASC functions for independent field army maneuver units of brigade or smaller size. A provisional DASC or augmented division tactical air control party is provided for separate or independent division operations.

(3) The direct air support center—

(a) Receives, plans, and coordinates Army requests for immediate tactical air support.

(b) Acts as an advisory agency to the corps TASE.

(c) Keeps the TACC advised of the effort needed to satisfy Army tactical air support requirements.

(d) Operates and provides net control for the Air Force air request nets.

(e) Coordinates with the associated corps TASE on the detailed integration of fixed-wing tactical air support with the fire and maneuver of the land forces.

(f) Requests additional tactical air support from the TACC when requirements exceed the sorties allocation,

(g) Informs the tactical air control parties of current and planned air operations.

(h) Provides overall supervision of tactical air control party activities.

(i) Exchanges weather information with the TACC and the associated corps TASE.

(4) When the level of tactical air operations is such that the full command and control capabilities of a TACC are not required, a DASC may be substituted as the senior Air Force operations center (para 5-10a (1)). In this case, liaison from the supported Army force similar to that provided the TACC, but appropriate to meet the demand, is required.

(5) When operating with NATO forces, the DASC may be referred to as the air support operations center (ASOC).

c. Airborne Battlefield Command Control Center (ABCCC). The ABCCC can also be employed as an airborne DASC to provide an interim capability for processing Army immediate requests for tactical air support under special circumstances, such as an airborne assault. It accomplishes the normal DASC functions from an airborne station until the DASC becomes operational. Liaison from the supported unit is provided in the ABCCC.

d. Tactical Air Control Party (TACP).

(1) *General* The TACP is the forward operations element of the TACS collocated at battalion, brigade, separate brigade, regiment, division, and corps. A TACP may be located at field army based on the tactical situation. While the DASC is the TACS element depicted at corps level, a TACP is provided and manned to reflect the planning required for overall support of corps tactical air operations. The TACP comes under the supervision of the director of the DASC, but may function independently or be assimilated by the DASC. The TACP advises the associated ground commander on all aspects of tactical air support operations, forwards immediate requests, and coordinates and controls tactical air support furnished Army forces. The TACP can control and coordinate the fixed-wing tactical air support provided by other services when control elements of the other services are not available.

(2) *Location.* The division and corps TACP normally are located with the TASE of the supported headquarters. The TACP below division normally are collocated with the respective FSCC. The TACP are equipped and manned by the Air Force, except for special-purpose vehicles such as armored personnel carriers that enable them to move and function with all maneuver elements.

(3) *Composition and function.* Composition of the TACP is varied to meet the requirements of the command echelon served. At battalion, it normally will include an air liaison officer (ALO), FAC, and communications personnel and equipment. At brigade, it normally will include three officers, (the ALO, operations officer, and FAC) and communications personnel and equipment. The TACP officers are knowledgeable in all tactical air support operations and provide advice and assistance on these functions. When necessary, however, specialist officers in these fields are provided. The division TACP consists of *four officers*

(senior ALO, fighter operations officer, air reconnaissance operations officer, and airlift operations officer) and communications personnel and equipment collocated with the TASE of the DTOC. The functions of the division and brigade TACP are essentially the same as those at battalion, except that division TACP personnel are seldom responsible for the control of airstrikes. Their primary responsibilities are to provide advice and assistance. Corps and field army TACP may be larger than the TACP at division, but the functions and duties are the same. Their duties for each air support task are described in (4) through (6) below.

(4) *Close air support.* The tactical air control party—

(a) Advises on capabilities, provides planning information and assistance to the ground force commander and staff on all aspects of fixed-wing CAS, and further provides liaison between Army and Air Force to insure integration of plans.

(b) Assists G3 air in developing apportionment recommendations for fixed-wing CAS.

(c) Advises higher and lower echelon TACP and the DASC of suballocations made by G3 air.

(d) Reviews and advises on approval of preplanned CAS requests.

(e) Receives and forwards requests for immediate CAS to the DASC and advises on their approval.

(f) Maintains current status information on availability of CAS resources.

(g) Coordinates airspace utilization with the FSCoord and the ACE; controls execution of fixed-wing CAS missions flown in support of ground forces; receives visual observations and post-strike damage reports from attack pilots and FAC; and passes information obtained to G3 air, G2 air, and the FSCoord.

(h) Disseminates, through Air Force channels, information concerning ground tactical situation, location of friendly units, restrictive fire plans, location of FSCL, and enemy ground activities affecting the air support mission.

(i) Advises and assists G3 air and the FSCoord in preparing recommendations for targets to be attacked by air-delivered special weapons and for air interdiction targets.

(j) Operates stations in Air Force air request net (HF-SSB/AM-voice), tactical air direction net (UHF/AM-voice), and the local ground operations net (FM-voice).

(k) Provides information and assistance to ground unit staff for preparation of air support OPLAN and OPORD and informs staff of Air Force plans and orders affecting the ground tactical plan.

(5) *Air reconnaissance.* The tactical air control party—

(a) Advises on capabilities, provides planning information and assistance to ground force commander and staff on all aspects of tactical air reconnaissance, and also provides liaison between Army and Air Force to insure integration of plans.

(b) Assists G2 air in developing apportionment recommendations.

(c) Advises higher and lower echelon TACP and the DASC of suballocations made by the G2 air.

(d) Reviews preplanned requests and advises on their approval.

(e) Transmits immediate requests to the DASC.

(f) Maintains current status information on tactical air reconnaissance capability and availability.

(g) Coordinates airspace utilization with FSCoord and ACE and controls execution of tactical air reconnaissance missions flown in DS of ground forces.

(h) Receives inflight reports of damage assessment and other visual observations from pilots and crews and passes information obtained to G2 air.

(i) Passes intelligence information on local enemy activities to higher and lower echelon TACP and to pilots.

(j) Disseminates intelligence information on matters affecting the tactical air reconnaissance mission to higher and lower Air Force echelons.

(k) Provides information and assistance to G2 air for preparation of tactical air reconnaissance portion of OPLAN and OPORD and informs G2 of Air Force tactical air reconnaissance plans that may affect the local intelligence collection plan.

(6) *Airlift.* The tactical air control party—

(a) Advises on capabilities, provides planning information and assistance to ground force commander and staff on all aspects of tactical airlift, and also provides liaison between Army and Air Force to insure integration of plans.

(b) Assists the transportation staff officer

in developing apportionment recommendations for tactical airlift.

(c) Advises higher and lower echelon TACP and ALCC of suballocations made by the G4.

(d) Reviews and advises on approval of preplanned tactical airlift requests.

(e) Receives and coordinates requests for immediate tactical airlift and passes requests to the ALCC.

(f) Receives and coordinates locally initiated requests for immediate and preplanned tactical airlift and passes requests to the ALCC.

(g) Maintains current status information on tactical airlift capability, configuration, and availability.

(h) Coordinates airspace utilization with the FSCoord, the ALCC, and the ACE for airlift missions flown in DS of ground forces.

(i) Insures briefing of pilots on anticipated landing zone/drop zone conditions prior to mission execution, receives inflight reports of visual observations, and passes information to G2.

(j) Disseminates information on logistic installations and other combat service support to higher and lower echelon TACP and to pilots.

(k) Provides information and assistance to the TO for preparation of tactical airlift portion of OPLAN and OPORD and informs the TO of Air Force plans that may affect the local air movement plan.

e. Forward Air Controller. The forward air controller (FAC) coordinates and controls aircraft engaged in airstrikes to support ground operations. His primary mission is predicated on passing target identification to strike aircraft and integration of the requested airstrike with the fire and maneuver of the supported ground force.

f. Airlift Control Center. The airlift control center (ALCC) is a subordinate element of the TACC, where the detailed planning, coordination, and tasking for airlift operations are accomplished. Since the tactical airlift force supports all services involved in a joint operation, service representatives normally are positioned in the ALCC to accomplish liaison and coordination for their component. The ALCC is located near, or collocated with the TACC.

g. Airlift Control Element. Airlift control elements (ALCE) are established at airfields and landing zones to provide aircraft movement control, communications, supervision of loading and off-loading teams, coordination of aeromedical

evacuation, and continuous liaison with supported services. The ALCE has operational control of all tactical airlift resources participating in an operation while they are on the ground at the operation site. Each service component being supported is represented in the ALCE.

5-11. Air Traffic Control and Direction Agencies

a. Control and Reporting Center (CRS)/Air Traffic Regulation Center (ATRC). The CRC provides radar control and surveillance within its assigned area of responsibility. It collects, evaluates, and disseminates information on air activity. The CRC provides early warning and identification to air defense elements and provides radar control of tactical air support missions. Army air defense and aviation liaison officers are exchanged with the CRC. The ATRC is an integral part of the CRC and regulates the flow of air operations under the operational control of the TACC. The ATRC coordinates closely with Army and other air traffic control agencies.

b. Control and Reporting Post (CRP). The CRP is subordinate to the CRC and provides radar control and surveillance in an assigned area of responsibility. The CRP can assume CRC functions in an emergency.

c. Forward Air Control Post. The forward air control post (FACP) is a lightweight, highly mobile, radar surveillance and control facility. It provides radar surveillance and control in the

forward combat area as designated by the CRC. The FACP primarily is responsible for radar control of tactical air support missions to and from designated control points for handoff to FAC directing CAS strikes. The FACP may function as CRP when necessary.

d. Air Support Radar Team. The air support radar team (ASRT) is a mobile unit equipped with precision radar to provide guidance for tactical fighter aircraft during attacks against ground targets in marginal weather. This team also may be used to position tactical air reconnaissance and tactical airlift aircraft over predetermined coordinates.

e. Combat Control Team. A combat control team (CCT) consists of Air Force personnel organized, trained, and equipped to identify and mark drop, landing, or extraction zones. The CCT also provides limited weather observations; installs and operates navigational aids and communications; and, in the absence of an established air traffic control facility, controls air traffic in an airhead area.

5-12. Air Weather Service

Weather detachments are an integral element of the TACS at all levels. They observe, analyze, forecast, report, and advise on weather conditions and their influence on tactical air support missions. Their services are provided to Army forces, when required. Additional information is contained in FM 31-3.

Section IV. THE NAVY/MARINE TACTICAL AIR CONTROL SYSTEM

5-13. General

a. Naval aviation, which encompasses both Navy and Marine Corps aircraft, executes the functions of air defense, close air support, interdiction, and other assault support for amphibious operation, the aircraft and control of the aircraft are based at sea. As the assault progresses, Marine Corps aircraft are phased ashore along with the means for executing command and control of air operations ashore. When the landing force is firmly established ashore, control of shore-based aircraft is passed ashore.

b. The assault airlift capability of the Marine Corps is normally required for the tactical mobility of Marine forces. However, close air support can be provided to Army ground forces in cases of emergency, or when the CAS is not immediately

required by the Marine forces to which the CAS is dedicated.

c. Agencies of the Air Force-Army TACS and the Navy-Marine Corps command and control system are similar since a concerted effort has been made to have a common definition of these agencies. The fundamental difference between the two systems is that the Marine Corps provides CAS assets to each infantry division, whereas in the Air Force system no assets are dedicated to any Army organization but are instead managed at the highest command level. Also, the Marines have TACP organic to each infantry element, thus providing fire support coordination for all battalions, regiments and divisions. FM 31-12 contains a detailed discussion of the Navy-Marine Corps command and control system and the additional agencies included in the system.

5-14. Navy-Marine Support of Army Forces

a. The Fleet Marine Force (FMF) contains a separate brigade platoon to support a US Army *or* Allied brigade, or element thereof. It provides the control and liaison agencies associated with the ground elements of the landing force in the control and employment of naval gunfire and naval close air support in the amphibious assault, or in other type operations when support is provided by naval gunfire and/or naval air. This includes the provision of support to U.S. airborne units and parachute qualification of the needed teams and parties as determined by the FMF commander. This platoon also forms the nucleus for expansion to an air/naval gunfire liaison com-

pany (ANGLICO), if required to provide support to a US Army or Allied division.

b. The separate brigade Fleet Marine Force platoon is attached to a US Army or Allied brigade for the amphibious assault, or for other type operations when fire support is provided by naval gunfire and/or naval air. Task organized control and liaison teams and parties are further assigned to battalion echelons to advise on the capabilities, limitations, and employment of naval gunfire and/or naval air support; and to provide the necessary personnel and communications required to request, direct, and control the support. Operating procedures and communication nets are similar to those contained in FM 31-11/LFM-01 and associated publications. Figure 5-2 illustrates the organization of this platoon.

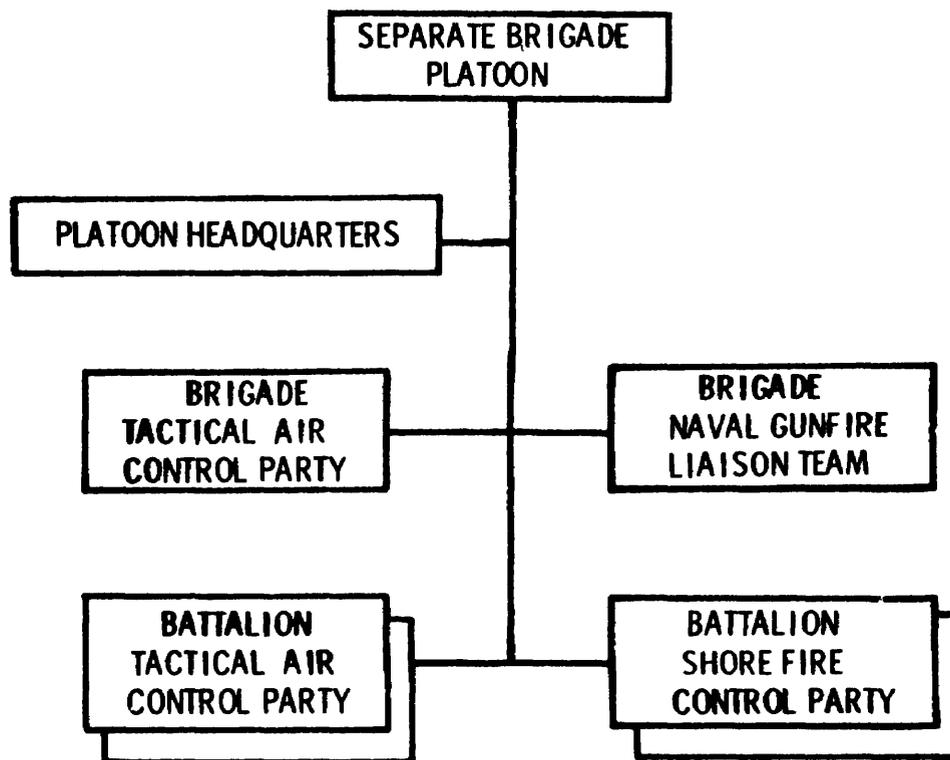


Figure 5-2. Air/naval gunfire liaison platoon, Fleet Marine Force.

Section V. AIR-GROUND OPERATIONS SYSTEM COMMUNICATIONS

5-15. General

a. Communications is an essential element of the AGOS. They provide the primary means of transmitting requirements between headquarters and the facilities for processing and disseminating information and intelligence resulting from tactical air operations. Communication media make possible the coordination of air support operations with the other air combat functions

and the integration of tactical air operations with ground tactical operations. The high degree of reliance on radio communications increases the possibility of enemy intercept and subsequent exploitation of those communications. Exploitation can take the form of intelligence information on friendly operations, or more direct actions ranging from degradation of communications through jamming and deception, to bringing fire to bear

on friendly forces. Therefore, adequate provisions must be made for effective communications security (COMSEC) practices and electronic counter-countermeasures (ECCM) as described in FM 32-5 and FM 24-18, respectively.

b. Army and Air Force components both provide communications support for the AGOS. This support, consisting of single-sideband (SSB) radio, both voice and radio teletypewriter (RATT), and sole-user telephone and teletypewriter circuits using the Army command and Army area communications systems, provides the

means to receive and process requests for air support and to disseminate information resulting from air support operations.

c. That part of the air-ground communications system provided by the Army is used for requesting preplanned air support and for coordinating air operations with ground operations. The Air Force system is used for requesting immediate air support and for controlling CAS, air reconnaissance, and airlift missions.

d. Figure 5-3 is a summary of the principal communications nets of the AGOS.

ELEMENT \ NET	AF air request net (voice)	AF tactical air direction net(voice)	MIBARS fid army op net (SSB-RATT-voice)	GLO net (SSB-RATT-voice)	Corps G2 air MI co (aerial survl) op net SSB-RATT-voice).
Field army	X ¹	X ¹	X	NCS	
Corps	X ¹	X ¹	X		X
DASC	NCS	NCS			
Div	X ¹	X ¹			
Bde	X ¹	X ¹			
Mvr bn	X ¹	X ¹			
Cav sqdn	X ¹	X ¹			
MI co(aerial survl)					NCS
MIBARS			NCS		
ARLO			X		
GLO				X	

¹TACP net. Equipment provided by AF.

LEGEND

NCS - Indicates net control station.
 X - Denotes receiver-transmitter.

Figure 5-3. Summary of air-ground operations communications nets.

5-16. Tactical Air Force Air-Ground Nets

a. The AFCC is responsible for establishing organic communications systems and any joint communications facilities directed by the joint force commander. The TAF command post is the focal point of the tactical air control communications system. This system provides the AFCC with the communications necessary to command and control tactical air operations and to coordinate these operations with those of Army forces. In addition to the primary facilities, which provide point-to-point, air-to-air, and air-to-ground communications, alternate facilities are available. Compatible radio equipment terminates radio networks between Army forces and TAF units at any echelon required.

b. Separate nets for command, control, and direction of tactical air support efforts are included. Of interest to Army commanders are—

(1) The Air Force air request net, which is an element of the Air Force command and control network. It is a means of forwarding immediate requests for tactical air support to the DASC. This net also provides backup to Army communications for preplanned requests.

(2) The inflight report net, which is used by tactical air support pilots for airborne transmission of visual observations of immediate interest, such as airstrike results and intelligence information.

(3) The tactical air direction net, which is used by the TACP, CCT, DASC, CRC, CRP, and the FACP to direct and control tactical air support aircraft. Each TACP and CCT acts as net control for a tactical air direction net. The DASC can enter any of these nets as required. The CRC, CRP, and FACP also are provided air-ground radios that can enter any net for direction purposes.

5-17. Army Air-Ground Communications Nets

a. The field army or independent corps commander is responsible for establishing the communication facilities to submit preplanned air

support requests and to disseminate information and intelligence obtained through air support means. He uses wire, messenger, radio, or any combination of these means to insure rapid, accurate transmission of these messages; however, radio is the primary means,

b. The radio nets utilized in the field army are—

(1) The MI BARS-field army operations net, which provides communications between the MIBARS headquarters, and the field army and corps G2 air at the TOC. This net is used to relay imagery interpretation reports, pilot debrief reports, and other information from the MIBARS to the field army and corps G2 air. The MIBARS radio net permits the MIBARS and the field army and corps G2 air to pass directly to the MIDARS detachments information on immediate and preplanned requests. As organized under H-series TOE, this net may be entered by the division G2 air when required and authorized. The possibility of this communication link is noted in FM 30-20.

(2) A GLO operations net, which provides communications between the GLO located with the TAF fighter units and the field army G3 air in the TOC. This net is used to transmit debrief reports and other information from the liaison officers to the G3 air and allows the G3 air to pass information on immediate and preplanned requests directly to the liaison officers. The net is also used to pass ground situation information to the GLO for his use in keeping the tactical wing commander informed and in briefing air crews.

(3) A corps G2 air MI company (aerial surveillance) operations net which provides communications between the corps G2 air at the CTOC and the corps MI company (aerial surveillance). This net is used to transmit imagery interpretation reports and debriefing reports from the MI company (aerial surveillance) to the G2 air. The net allows the G2 air to pass information on immediate and preplanned requests directly to the MI company (aerial surveillance). The ARLO at the Air Force reconnaissance squadron headquarters and the senior ARLO at the Air Force reconnaissance wing headquarters may use this net.

CHAPTER 6

ARMY AVIATION SUPPORT OPERATIONS
(STANAG 2099 and 2129)

Section 1. INTRODUCTION

6-1. General

This chapter provides guidance on Army aviation support operations. The primary functions of attack helicopter operations, air reconnaissance and surveillance, and airmobile operations as a part of combined arms team are discussed in detail. Paragraphs 6-1 and 6-2 are this introduction to Army aviation support in general while paragraphs 6-3 through 6-6 cover the categories of attack helicopter operations, the procedures for requesting and processing both preplanned and immediate attack helicopter fire and maneuver requests, and aerial field artillery fire support requests. Paragraphs 6-7 through 6-11 include the missions of air surveillance and reconnaissance and their characteristics, collection methods, requests procedures, reports, and methods of dissemination. Paragraphs 6-12 through 6-15 pro-

vide a general discussion of airmobile operations to include command relationship, planning and request channels for airmobile operations, and special equipment utilized. Paragraphs 6-16 through 6-22 briefly discuss other Army aviation operations such as aeromedical evacuation, administrative and logistic missions, command and control, and others.

6-2. Army Aviation Support

The combat commander utilizes Army aviation support elements to increase the tactical capabilities of his entire force. Army aviation support generally is used when it is the most effective support means available. The uses of Army aviation assets vary with each commander's desires. This chapter discusses the activities of attack helicopter operations, air reconnaissance and surveillance, and airmobile operations.

Section II. ATTACK HELICOPTER OPERATIONS

6-3. General

a. Army Combined Arms Operations. Attack helicopter forces are an integral component of the Army combined arms team, other principal elements of which are infantry, armor, field and air defense artillery forces. The combat potential of attack helicopter forces derives from their full and continuous integration into the combined force directly controlled by the ground commander. This intimate combination of battle forces, which provides maximum control, coordination, and responsiveness, is precisely that which has characterized the traditional Army combined arms team. The inherent capability of attack helicopter forces to deliver fires from aerial platforms is thus only one contribution of those forces to the ground battle, just as antitank fire is only one contribution of the tank. Employed as an integral element of the combined arms team, attack heli-

copter forces significantly enhance the total combat power at the disposal of the ground commander.

b. Aerial Fire Missions. Attack helicopters engage in offensive, defensive, and other operations that contribute to the location and destruction of hostile targets to include self-protection, escort, fire suppression, reconnaissance, security, raids, screening, and antitank operations. The broad generic term of "roles" is used to describe the general categories of attack helicopter application. The more specific term "missions" is used to describe the lesser elements included in each "role." Continuing the development of this terminology, each "mission" would include several more specific and distinctive "tasks" to be performed by attack helicopters. There are currently two valid roles for attack helicopters:

(1) *Fire and Maneuver.* Attack helicopters, in a fire and maneuver role, provide the ground

commander with a capability to dominate terrain or enemy forces through application of terrain free combat power against key portions of the battlefield or ill-defined targets. This role includes the missions of—

(a) Traditional cavalry, complemented by the added mobility of helicopters. Support is characterized by lightly armed, highly mobile teams of attack helicopters, scout helicopters and airmobile infantry designed for optimum performance of reconnaissance, security, surveillance, and economy of force missions without becoming decisively engaged with the enemy,

(b) Airmobile force operations, which provide aerial fire support of utility and cargo helicopters en route as well as support of airmobile forces in and around the landing zone during assault and extraction.

(2) *Fire support.* Fire support encompasses the role of aerial field artillery in augmenting and extending the capability of field artillery to provide immediately responsive fire support to the maneuver commander. The primary objective of the aerial field artillery helicopter is to destroy or suppress the enemy through the concentrated delivery of aerial firepower against enemy armor, machinegun emplacements, bunkers, personnel, and other targets to assist the ground commander in accomplishing his mission.

c. *Command and Control.* Attack helicopter fire and maneuver units are requested, controlled, and coordinated through command channels over operational, administrative, or command communications nets. Aerial field artillery helicopter fire support units are requested, controlled, and coordinated through fire support channels in the same manner as other fire support means. Figure 6--1 illustrates the channels for requesting attack helicopters.

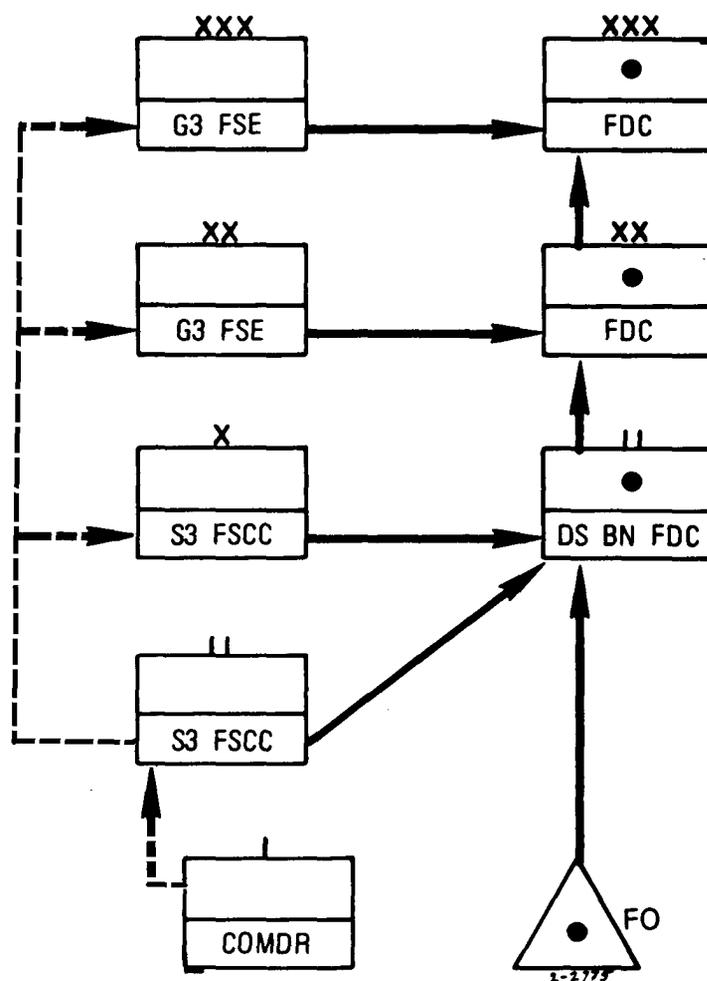
6-4 Attack Helicopter Fire and Maneuver Operations

a. *General.* Attack helicopter units are either categorically assigned as organic units, attached in a temporary status, or placed under operational control of the supported unit commander. Attack helicopters are integrated with the plan of maneuver of land combat forces and deliver responsive fires to support the ground maneuver elements. Attack helicopters, using a continuous harassing and exploiting technique, can have a damaging psychological effect on the enemy. Attack helicopters normally employ two common features of warfare—a base of fire and a maneuvering force. The base of fire is the element that restricts the

enemy's ability to maneuver during the engagement. The maneuvering force is the element that attacks and destroys the enemy by fire. Attack helicopters may perform either of these roles. Target characteristics and standoff distance necessary to avoid effective counterfire determine the type of armament needed by attack helicopter elements for a given engagement. Their roles may be interchanged when the maneuvering force completes its task and then becomes the new base of fire, while the old fire element becomes the new maneuver force. Attack helicopters may perform only in the maneuver role when other weapons such as mortars, antitank weapons, artillery or naval gunfire perform the base of fire role. This method of employment takes maximum advantage of the characteristics of the attack helicopter. For details of attack helicopter operations, see FM 140.

b. *Requests.* When attack helicopters are required in a fire and maneuver role and are not assigned or attached to a ground unit, they will be requested through command channels. Requests may originate at any command level and may be preplanned or immediate. Since most Army aviation resources are controlled at battalion or higher levels, the small-unit commander normally must request aviation support through operational channels. Approval or denial of a request normally is based on the availability of attack helicopters and the priorities established by higher command. Approved requests are forwarded through operational channels to the echelon capable of filling the requirement. If the request is beyond the capability of the available attack helicopter unit, the request may be forwarded to the next higher command for execution by Army aviation or assets of another service.

c. *Preplanned.* Preplanned requests are not used for organic or attached attack helicopters. The assets of organic or attached units are included in the ground commander's task organization for combat, thus insuring that the attack helicopter unit commander is available to participate in the planning phase of the operation. If during the task organization, additional attack helicopter assets are needed, the requests are forwarded through command channels. When preplanned requests are approved, the attack helicopter assets are placed under the operational control of the requesting unit commander. The Army commander of the task force establishes the degree of responsiveness required of his attack helicopters based on this assigned mission and the tactical situation.



LEGEND

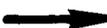
-  Aerial field artillery.
-  Attack helicopters other than aerial field artillery.

Figure 6-1. Attack helicopter request channels.

(1) *Command.* If the request for attack helicopters goes to division for approval, the tasking is made through the airspace coordination element (ACE) in the division tactical operations center (DTC) and passed to the tasked unit. If the tasking is for the duration of the operation or over a long time, the unit normally will place a liaison team with the supported battalion. In other cases where single tasks are prescribed, the normal method for assignment is to provide helicopter fire teams, platoons, or companies with the frequency, call sign, location of the supported unit, and an arrival time. The aviation unit commander serves as adviser to the ground commander

and recommends the employment of the aviation unit. Based on the ground commander's decision, the aviation commander employs his unit to assist in accomplishing the ground commander's mission.

(2) *Control.* The division commander is the primary control authority for the division. He exercises control by promulgating standing operating procedures (SOP) and rules for the use of airspace over the division required for conduct of ground combat operations. The maneuver unit commander determines priorities for the use of airspace by the systems supporting the ground operations in his area of responsibility. He directs

the use of artillery and attack helicopters, and he requests tactical air support. For multiple aircraft fights, airmobile operations, or large resupply operations, the ACE, in conformance with command guidance and policies established by the appropriate airspace control authority, will coordinate routes and altitudes. Necessary corridors may be established to preclude conflict among field artillery, air defense, and air support operations. The ground commander and local SOP determine the actual control of the aircraft in the target area.

d. Immediate. Requests for immediate attack helicopter support occur when a threat develops or a target is acquired and time is insufficient for detailed planning and coordination. The immediate procedure does not differ significantly from the preplanned procedure except that delivery time, planning, and coordination are abbreviated. The request usually results from an enemy contact or acquisition of a target. The company commander calls the battalion commander and gives a situation and target description in his request for immediate attack helicopter support. If the battalion commander has the requested support available and approves the request, he directs the mission from his own helicopter assets. If the battalion does not have the assets available, the request must be forwarded to brigade or division.

(1) *Command.* Command is handled in the same manner as in preplanned missions, except for the use of voice circuits for tasking the supporting unit. The attack helicopters may make an inflight diversion if the urgency dictates. If not, aircraft on ground alert are committed in response to the immediate request.

(2) *Control.* Once a mission is assigned, the control procedure is the same as for preplanned missions.

6-5. Aerial Field Artillery Fire Support Operations

a. General. Aerial field artillery (AFA) units can assume any tactical artillery mission. If assigned a direct support mission, the AFA unit must be augmented with additional personnel to provide the forward observers and liaison officers required by this mission. The forward observers (FO) and liaison officers (LO) of the tube artillery direct support battalion may perform these functions for the AFA unit. Aerial field artillery units are ideally structured for the reinforcing, general support (GS), and general support reinforcing (GSR) artillery missions. Aerial field artillery units can be employed against the entire spectrum of artillery targets.

b. Requests. Aerial field artillery fire support is provided, when appropriate, in response to requests submitted through the usual fire support agencies; i.e., FO, LO, or the fire support coordinator (FSCOORD). The appropriate fire direction center (FDC) will determine if AFA is to be provided. Requests will follow normal field artillery fire support request channels. The processing of fire requests for the various tactical missions that can be assigned to aerial field artillery units is explained in detail in FM 6-102.

c. Preplanned Fire Support. Preplanned aerial field artillery fire support follows normal field artillery planning channels. Forward observers (FO) submit the supported unit commander's proposed target list to the field artillery liaison officer at the maneuver battalion. The liaison officer resolves duplication and integrates the target list into the battalion commander's target list. The list is then submitted to the DS field artillery battalion. At the DS battalion, aerial field artillery requirements are identified, forwarded to division artillery, and, if approved, are incorporated into the artillery fire support appendix to the brigade fire support plan. Similar planning is accomplished at each higher echelon until the requested fire is either allocated or denied.

d. Immediate Fire Support. Requests for immediate field artillery fire support may be originated by a company commander through his FO or by the maneuver battalion or brigade commander through his artillery liaison officer. The request may state that AFA fires are preferred. The fire request is transmitted directly from the originating agency to the FDC at the field artillery battalion in DS of the brigade. At the FDC, the fire request is evaluated to determine whether the target can be more effectively attacked by AFA or other weapons systems. If the FDC determines that aerial field artillery is most appropriate, and if an aerial field artillery unit is reinforcing the DS artillery, the request is forwarded to that unit. If the DS battalion has no reinforcing aerial field artillery, the request is forwarded to the division FDC. If the decision is to provide aerial field artillery, the fire order is sent to the supporting aerial field artillery battalion. If suitable aerial field artillery means are not available at division, the F-DC transmits the fire request to corps where it is approved and ordered executed, or is disapproved.

e. Command and Control. Command and control of aerial field artillery normally parallels that of other field artillery, but is subject to airspace coordination rules and SOP applicable to Army

aircraft. Control and coordination of supporting fires are the responsibility of the ground commander and may be accomplished by the commander personally, by elements of his staff, by his artillery or aviation representatives, or by a combination of representatives under his or his staff's supervision. Additionally, he may direct a subordinate commander who is in a better position, such as the aviation mission commander of an airmobile operation, to coordinate these fires.

6-6. Coordination of Attack and Aerial Field Artillery Helicopter Operations

Attack helicopter units of air cavalry units assign responsibility for an area of operations con-

trol and coordinate all fires on surface targets within that area. However, when these units enter an area for which a ground commander has responsibility, or when a ground commander assumes responsibility for an area in which they are operating, the aerial fires from these elements come under the control and coordination of that ground commander or his designated representative. Aerial field artillery operations are coordinated by the FSCOORD at each echelon of command from maneuver battalion through division. The FSCOORD has the specific responsibility to coordinate all supporting fires on surface targets (whether preplanned or targets of opportunity) as directed by the maneuver unit commander.

Section III. ARMY AIR SURVEILLANCE AND RECONNAISSANCE

6-7. General

Army air surveillance and reconnaissance missions are executed by Army aircraft to obtain information about the activities and resources of enemy forces, the weather, or terrain in support of immediate tactical operations. These missions are flown by helicopters and fixed-wing aircraft utilizing visual air surveillance or reconnaissance, airphoto reconnaissance, infrared reconnaissance, radar surveillance, and electronic reconnaissance. These aircraft can cover relatively large areas, thus permitting ground reconnaissance elements to concentrate on areas of greatest intelligence productivity. As requirements for air surveillance or reconnaissance are developed, they are either accomplished with Army aviation assets organic to that echelon or are submitted to a higher headquarters for accomplishment. Considerations that may influence the use of Army air reconnaissance assets are--

The relative urgency of the mission to require the rapid response provided by aviation resources.

The availability of resources.

The relative vulnerabilities of Army aircraft for the particular mission.

6-8. Characteristics of Army Air Surveillance and Reconnaissance Missions

a. Aerial reconnaissance missions are directed toward one or more specific targets without a requirement for continuous coverage. Reconnaissance missions normally are developed from specific information indicating that an area may be

of intelligence value, or to provide detailed coverage to support a current or planned operation. Reconnaissance targets beyond the forward edge of the battle area (FEBA) may require penetration of enemy airspace when adequate coverage cannot be obtained by flying behind the FEBA. Reconnaissance missions generally are flown at low altitudes, thereby giving the advantage of providing added detail by concentrating the aerial sensor over a specific target.

b. Aerial surveillance missions involve the systematic observation from the air of areas by visual, electronic, photographic, or other means. They are characterized by frequent flights over expanses of terrain. While these missions generally are conducted without regard to specific targets, major areas of interest may be emphasized. Large area coverage sensors, such as radar, or visual observation is normally employed to maximize the area to be observed. Air surveillance missions have the advantage of—

(1) Covering large areas rapidly and continuously, with a minimum expenditure of aircraft and sensor capabilities.

(2) Allowing observation of movement or changes as they take place on the enemy side of the FEBA, which may provide the commander early warning of possible enemy intentions and may identify specific target areas.

6-9. Aerial Collection Methods

a. Visual. Visual air surveillance and reconnaissance provide the most rapid means of collecting selected types of intelligence information through observation from an aircraft. General types of visual air surveillance and reconnaissance

are area search, specific search, and route reconnaissance.

b. Permanent Record Imagery. Permanent record imagery is essential for the planning and execution of all phases of operations by providing recorded images that can be studied, analyzed, and interpreted. These analyses provide a higher degree of detail and accuracy than can be obtained from visual observation. Permanent record imagery may be obtained through the use of photographic devices, infrared sensory devices, and radar sensory devices.

(1) *Airphotography* is classified according to camera position and the area coverage. Depending on camera position, airphotography is either vertical, oblique, or panoramic. Area of coverage determines pinpoint, strip, or area airphotography.

(2) *Infrared (IR) imagery* is the detection of thermal radiation from the terrain and objects on the terrain. An infrared system most effectively operates at low altitudes and is limited to the area directly below the flight path of the aircraft. It normally is used for point, linear, or small area targets. Immediate inflight returns for IR imagery can be provided to requesting units through ground sensor terminals and by inflight reading of the display on the observer's console.

(3) *Side-looking airborne radar (SLAR)* is an active electronic device that emits energy and senses that portion of the emitted energy that is returned by reflection off the terrain and objects on the terrain. The energy is directed to each flank of the aircraft flight path. The SLAR device produces two images on strips of film simultaneously. It depicts fixed target information, such as terrain features and buildings, and moving target information. The SLAR device also can provide immediate inflight returns through ground sensor terminals and from inflight reading of the display on the observer's console.

c. Airborne Personnel Detector. The airborne personnel detector (APD) is an air reconnaissance device employed to provide a tactical commander with information indicating whether an area is occupied or recently has been occupied. The APD cannot detect humans, but it can detect certain human-related emissions that indicate the presence or recent presence of personnel in the area.

d. Weather Reconnaissance. Weather reconnaissance is conducted to obtain weather data over areas where weather reports are not available. Normally, weather reconnaissance is performed

by Air Force weather reconnaissance units; however, Army aircraft can perform limited visual weather observation.

e. Army Air Surveillance and Reconnaissance Planning, Missions, and Collection Means. FM 30-20 contains a detailed discussion of these items.

6-10. Army Air Surveillance and Reconnaissance Request Procedures

a. Preplanned Requests.

(1) The initiation, processing, and implementation of preplanned requests are basically the same at all levels. Collection plans are developed through careful planning and consideration at each echelon before being submitted to the next higher headquarters. Collection plans represent the total known needs of the command as of the time of their submission.

(2) Preplanned Army air surveillance and reconnaissance requests are submitted through S2/G2 air channels. At any echelon, the request may be approved or disapproved or another method of obtaining the required information may be substituted. The requesting unit is notified of disapproval or substitution with the reasons thereof.

(3) At each level, when a request for air surveillance or reconnaissance is approved, it is integrated into the overall collection plan of that echelon. Army aircraft, including aircraft from supporting artillery and combat support elements when available, are considered for all missions that fall within their capabilities. The lowest echelon possessing the organic Army aviation capability orders the mission flown. Below field army, approved requests that cannot be accomplished by organic Army aviation means are submitted to the next higher echelon for consideration and inclusion in the plan at that level.

(4) At field army, plans from lower echelons are integrated by the G2 air into the overall field army collection plan. Requests within the field army capability that are approved are assigned to organic Army aviation units for execution. All other approved requests are coordinated with the tactical air control center (TACC) for accomplishment as a tactical air reconnaissance request (fig 4-4).

b. Immediate Requests. Immediate requirements for visual air reconnaissance, aerial photography, or other imagery may be met by either tactical air reconnaissance or Army air reconnaissance. Requests are submitted as a tactical air recon-

naissance request through the tactical air control party (TACP) directly to the direct air support center (DASC). All intermediate TACP monitor the request and notify the G2/S2 air at their level. Any intermediate echelon capable of executing the mission with Army aviation resources cancels the tactical air reconnaissance request and orders the mission flown by Army aircraft (fig 4-4). While most requirements for air surveillance or reconnaissance will originate below corps level, situations may necessitate an immediate request at either corps or field army. In these instances, the requests are processed similarly to a preplanned request. The exception would be that requests approved but not within the Army aviation capability are submitted directly to the DASC.

6-11. Reporting and Dissemination

a. Information of intelligence value that is immediately exploitable is passed through the quickest means available. Usually, this is accomplished in the form of an inflight report or a hot photo report (HOTPHOTOREP).

b. The inflight report is transmitted by the aircraft crew during a mission as soon as mission results are available or in sufficient time to report tactical information of such importance that delay in reporting the information would render it useless. The report is passed by radio, in the clear, unless prearranged codes have been established.

c. A mission report (MISREP) is submitted at the conclusion of each mission. The report is based on the notes and observations made during the debriefing and includes inflight reports. Prepara-

tion and dissemination of MISREP are accomplished within 30 minutes after completion of the mission. If the sensory readout is not available in time for the MISREP, or if further interpretation of the images reveals significant new information, it should be reported by a HOTPHOTOREP.

d. A HOTPHOTOREP is rendered at the earliest possible time after the mission aircraft has landed and the imagery has been received for processing (usually within 1 hour). It is a concise report of significant information of immediate tactical value and frequently it is used to supplement the mission report.

e. An immediate imagery interpretation report is provided when requested or when full interpretation reveals additional intelligence information not previously reported on the HOTPHOTOREP or MISREP, usually within 4 hours after mission aircraft has landed.

f. A general imagery interpretation report provides detailed information in response to a specific request.

g. Summary reports are a consolidation of information on selected enemy activity and are submitted to the S2/G2 air according to his schedule. He uses these reports to analyze the enemy situation and the effectiveness of the air reconnaissance and surveillance efforts and to assist in further operations.

h. Detailed information on Army air surveillance and reconnaissance reporting formats and dissemination procedures is contained in FM 30-20.

Section IV. AIRMOBILE OPERATIONS

6-12. General

a. Airmobile operations are those in which the combat forces and their equipment move about the battlefield in air vehicles under the control of a ground force commander to engage in ground combat. With this direct control of airlift, exercised through operations center channels, employment of combat elements is more responsive to changes in the tactical situation. Without it, advantages such as flexibility, surprise, and an immediate execution of orders, would suffer. Airmobile operations include airlift of units for combat operations, shifting and relocation of units in the combat zone, and the air movement of equipment and supplies.

b. Army airlift units are organic to the infan-

try, airborne, and airmobile divisions. Additional units are organized as separate units for attachments to corps and field army. Special units may be required to conduct airmobile operations such as Army pathfinder units. Army pathfinder units provide navigational assistance and aircraft control services as necessary during any phase of an operation that requires sustained employment of Army aircraft. Pathfinders are normally used to select, improve, mark, and control landing/drop zones. They may also operate at forward helipads. The pathfinder facility maintains communications with aircraft and fire support units as necessary for control and coordination in the landing/drop zone area. Airmobility for armored and mechanized infantry divisions is provided from corps and field army resources when required.

c. An Army airlift unit may be employed as an organic part of a force, as an attachment, as a unit under OPCON, or in the missions of DS or GS. The preferred method for employment of non-organic Army airlift units is assignment of a DS or GS mission down to the lowest echelon capable of coordinating the airlift activity. In all cases, aviation unit integrity is maintained as nearly intact as possible. Additional information on airborne operations is contained in FM 57-35.

6-13. Command Relationships

The commander of a supporting Army aviation unit becomes a subordinate commander and an adviser to the supported US Army land force commander. Although the aviator in command of an aircraft is the authority on the technical operation of that aircraft, the Army commander to whose command the Army aviation unit is assigned or attached exercise the same command function over the aviator, organization, and equipment as he does over his other Army units.

6-14. Planning Channels for Airmobile Operations

a. Airmobile operations are classified as combat support or combat service support depending on the purpose of the operation and the type of cargo airlifted. Army airlift units may be employed in either type of operation.

b. Combat support operations are those in which the aircraft insert, extract, or resupply ground combat elements, with an immediate influence on a tactical engagement or operation. Combat support airlift is planned and coordinated through tactical operations channels.

c. Combat service support operations are those in which the airlift unit is employed to provide supply, transportation, patient evacuation, or other services to ground combat elements. Combat service support airlift, except aeromedical evacuation, is planned and coordinated through logistic channels. Aeromedical evacuation is planned and coordinated through medical channels.

6-15. Request Procedures for Airmobile support

a. *General.* Requests for airmobile support may originate at any echelon of command. Requests may be for planned future operations or for immediate airlift to satisfy an unforeseen requirement. Requests are forwarded through the appropriate channel, i.e., operations or logistic, to the command echelon having the authority and possessing the capability to approve the request.

Requirements that cannot be met by Army aviation units may be disapproved or converted to requests for Air Force tactical airlift, if appropriate. The originating unit is notified of disapprovals or conversions to tactical airlift and of the reasons therefor.

b. *Preplanned Airmobile Operations.*

(1) The unit requesting airlift support submits tentative planning data such as airlift mission, estimated aircraft requirements, time required for aircraft, and other information that will assist the approving commander in arriving at a sound decision. The aviation staff officer assists the requesting unit in preparing these tentative planning data.

(2) Close coordination among the operations, logistic, and aviation staff elements is maintained throughout the processing of the request to insure economical employment of airlift resources and adherence to the commander's policies and priorities. When the decision is made to provide the requested support, the approving commander normally will place the required number of aircraft in DS of the requesting unit for a specified time or for the duration of the mission. Airlift unit integrity is maintained as much as possible.

(3) The unit requesting the airlift support is responsible for all planning and coordination incident to the lift except that which relates directly to control and operation of aircraft in flight and combat service support for the airlift unit. The airlift unit plan is based on the plans of the supported unit. The supported unit is provided planning assistance by the airlift unit commander.

c. *Requests for Immediate Airmobile Support.* Requests for immediate airmobile support are transmitted to the appropriate operations center by the most rapid communications means available. Each echelon reviews and approves the request before passing it to the next higher echelon. The lowest echelon approving the request and possessing the required airlift capability orders the mission flown. Planning and coordination responsibilities are the same as for preplanned operations and are as thorough as the situation permits.

d. *Special Equipment.* Cargo helicopter units furnish tiedown straps and devices for restraint of items to be loaded inside the cargo compartment of the aircraft. The supported unit must arrange for any special equipment needed to palletize or unitize load items, and for slings, nets,

or other devices used to prepare loads for external lift or air drop. When supported by assault helicopter assets, the supported unit must also furnish tiedown equipment. The required equipment is obtained in advance to allow loading or rigging before the aircraft arrive. The airlift unit com-

mander provides advice and assistance on the quantity and the type of special equipment required, allowable loads, and loading and rigging procedure. Reinsures the return of special equipment left aboard aircraft to the supported unit on completion of the operation.

Section V. GENERAL ARMY AVIATION MISSIONS

6-16. Army Aeromedical Evacuation

a. Army aeromedical evacuation is the responsibility of the Army Medical Department (AMEDD). The AMEDD air ambulances are equipped for, manned for, and dedicated to the support of health services missions; all operations are conducted under the control of the appropriate medical unit commander. Aeromedical evacuation includes the related functions of—

(1) Battlefield pickup of patients and their transportation to initial treatment facilities in the combat zone.

(2) Transportation of patients between treatment facilities subsequent to the initial pickup.

(3) Movement of medical personnel and equipment.

(4) Uninterrupted delivery of whole blood, biological, and medical supplies.

(5) Air crash rescue.

b. Army air ambulances are conspicuously marked and medically equipped for medical evacuation missions. These aircraft are utilized for medical missions only. Some air ambulances are also equipped for suppression of post crash fires, forced entry, and extrication of personnel from crashed aircraft or other vehicles. When AMEDD air ambulances are not available, other Army aircraft may be diverted from their primary missions to assist in aeromedical evacuation operations. When so diverted, these aircraft are controlled by the medical unit commander.

c. See FM 8-10 for a detailed discussion of the aeromedical evacuation system.

6-17. Command and Control

a. During an operation, the combat unit commander may use a command and control (C&C) helicopter as an aerial command post from which he observes the operation and directs his forces. In addition to the commander, the C&C party will normally consist of an operations officer, an intelligence officer, and possibly an air liaison officer to assist in the control and coordination of the operation. The use of a C&C helicopter is

especially advantageous during the conduct of airmobile operations when the supporting aviation unit commander is flying the C&C aircraft. This arrangement provides for instant coordination between the aviation and the ground combat unit commanders.

b. Command and control helicopters are normally equipped with specialized communications equipment to provide a means of direction all elements involved in the operation.

6-18. Administrative Missions

Army aviation units perform a variety of administrative missions such as air courier service and transport of command and staff personnel. Commanders must closely monitor and control the use of aircraft for administrative purposes to insure that aircraft assets are used only when other, more economical, transportation means are not available. Additionally, when single aircraft administrative flights are held to a minimum, airspace control and coordination requirements are substantially reduced.

6-19. Logistic Missions

a. The inclusion of Army aircraft in the logistic transportation system has added a mode that can provide rapid movement of cargo over broad areas with little hindrance from natural or manmade barriers. Army aviation units, such as the assault support and heavy helicopter companies, provides airlift for combat service support operations. An assault support helicopter company provides airlift of personnel and cargo, and a heavy helicopter company is employed primarily to airlift heavy or outsize cargo loads. The heavy helicopter company also provides supplementary airlift of personnel and a means to evacuate damaged or crashed aircraft or other sensitive equipment.

b. The aircraft of these units are generally in great demand, are relatively expensive to operate, and require a considerable amount of maintenance per flying hour. For these reasons, commanders must insure that transport aircraft are not employed when another mode of transportation can effectively accomplish the mission.

c. See FM 55-40 for a detailed discussion of Army combat service support air transport operations.

6-20. Radiological Survey

Aerial radiological surveys are conducted to determine the location, extent, and intensity of nuclear radiation on the ground. Since aerial surveys are conducted rapidly and at a distance from the radiation source, the aerial survey party would be exposed to considerably less nuclear radiation than a ground survey party covering an equivalent area. Thus, aerial surveys can be employed over areas that have dose rates unacceptably dangerous to ground survey parties. Because of the aircraft speed and flexibility, aerial surveys can be employed to advantage over large areas, over unoccupied areas of operational concern, over enemy occupied areas, and over areas of difficult accessibility to ground troops. For a detailed discussion of radiological survey operations, see FM 3-12 and FM 1-105.

4-21. Search and Rescue Operations

Army aviation effectively participates in search and rescue missions. These missions may range from situations involving missing aircraft or persons in friendly areas to extracting downed crews from hostile territory. Aviation search missions usually employ single aircraft within assigned search areas or along designated courses. Search and rescue missions conducted in friendly areas do not require extensive coordination, except to insure that the entire search area is adequately

covered. On the other hand, search and rescue operations conducted in enemy held areas require extensive coordination to provide for responsive fire support, flack suppression, and medical assistance. A detailed discussion of search and rescue procedures is contained in FM 1-105.

6-22. Illumination

a. *Flares.* Aircraft flares may be employed to provide illumination for the conduct of all types of night operations. These flares have a very high illumination intensity, a slow rate of descent, and a relatively long burning time. The use of air-delivered flares frees ground weapons to fire conventional supporting fires rather than illumination missions. Close coordination among the supported combat unit, its supporting artillery, and the air crews providing the flare illumination is required to insure that the correct area is illuminated and that the aircraft avoid the artillery trajectories. Additionally, the air crews must be alert for the canisters and parachutes of burned-out flares.

b. *Searchlights.* Several types of searchlights are available for mounting in Army helicopters. Some lights are capable of providing either white or infrared illumination. The airborne searchlight is employed similarly to flares. Detailed instructions regarding the area to be illuminated should be given the flight crews so that they can select appropriate beam widths, flight altitudes, and flight paths. FM 20-60 and FM 1-105 contain detailed information for planning and executing illumination missions.