

SPECIAL OPERATIONS FORCES REFERENCE MANUAL



JANUARY 1998

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PREFACE

This unclassified *Special Operations Forces (SOF) Reference Manual* provides general information and mission planning data and focuses on US Army, Naval, and Air Force, Special Operations Forces (SOF). More specifically, this document is designed to accomplish four broad purposes:

- a. Provide SOF personnel with a single primary source of fundamental reference material
And planning data on all SOF components;
- b. Provide newly assigned SOF personnel or non-SOF personnel an overview of special operations and Special Operations Forces in order to facilitate the integration of conventional forces and provide SOF capabilities and planning data to conventional force staff officers who may not routinely use this data;
- c. Provide standard, unclassified SOF reference data to SOF faculty members at PME institutions for use in their instruction; and
- d. When combined with tactical situations and scenarios, to provide SOF commanders and units a vehicle to facilitate unit/staff-level seminar wargames.

The target audience for the manual is intended to be Special operations staff officers and NCOs at USSOCOM, its component and subordinate commands, the theater Special Operations Commands (SOCs), and the conventional force headquarters/unified commands and their staffs which may employ SOF in their areas of responsibility (AORs).

This reference manual is doctrinally based, drawing information and data from Joint, USSOCOM, and Service publications. Distribution for this document is to US Government personnel and agencies only in accordance with DoD Directive 5230.24. Personnel requesting a copy of this document or who wish to submit questions, comment, and issues for inclusion in future updates of the manual should contact: United States Special Operations Command, Center for Plans, Operations and Training, 7701 Tampa Point Boulevard, MacDill AFB, FL 33621-5323.

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CHAPTER 1

INTRODUCTION TO SPECIAL OPERATIONS

SPECIAL OPERATIONS

Special Operations (SO) encompass the use of small units in direct or indirect military actions focused on strategic or operational objectives. They require units with combinations of trained specialized personnel, equipment, and tactics that exceed the routine capabilities of conventional military forces. SO are characterized by certain attributes that cumulatively distinguish them from conventional operations. These operations are politically sensitive missions where only the best equipped and most proficient forces must be deployed to avoid detection and possible mission failure that can result in damage to US prestige and interests.

Four Factors For Successful Special Operations

- Clear national and theater strategic objectives.
- Effective command, control, communications, computers, and intelligence (C4I) support at the operational level.
- Competent tactical planning and execution.
- A force trained, equipped, and organized to conduct Special Operations.

Characteristics of Special Operations

- Special Operations normally require operator-level planning and detailed intelligence.
- Knowledge of the culture(s) and languages of the geographical area in which the mission is to be conducted.



SEAL Swimmer Cast and Recovery

- Rigorous training and rehearsals of the mission are integral to the success of the mission.
- They are often conducted at great distances from the supporting operational bases.
- They may employ sophisticated communications systems.

- They frequently require discriminate and precise use of force. This often requires development, acquisition, and employment of equipment not standard for other Department of Defense forces.
- They employ sophisticated means of insertion, support, and extraction to penetrate and successfully return from hostile, denied, or politically sensitive areas.

Characteristics of Special Operations Forces (SOF)

SOF are unique because they provide the National Command Authority (NCA) a broad range of capabilities. The demands of SO require forces with attributes that distinguish them from conventional forces:

- SOF personnel undergo careful selection processes or mission-specific training beyond basic military skills. These programs make unlikely any rapid replacement or generation of personnel or capabilities.
- SOF personnel maintain a high level of competency in more than one military specialty. Selected SOF are regionally oriented for employment; cross cultural communications skills are a routine part of training. (Under most circumstances, SOF are not a substitute for conventional forces, but a necessary adjunct to existing conventional capabilities.)
- SOF operations are frequently clandestine in nature to ensure mission success. Much of the equipment used by SOF has been designed or modified to meet specific operational requirements. As such, SOF equipment is often delivered in small quantities and is difficult and costly to repair and replace.
- SOF maintain a very high level of pre-conflict readiness, and are often in the first echelon of any commitment of US Forces. This emphasized the importance of joint, collective training tailored to achieve and maintain mission capabilities.

Special Operations Principal Missions

Nine activities have been designated as Special Operations Principal Missions (see Figure 1-1). These are: Direct Action (DA), Combating Terrorism (CBT), Foreign Internal Defense (FID), Unconventional Warfare (UW), Special Reconnaissance (SR), Psychological Operations (PSYOP), Civil Affairs (CA), Information Operations (IO), and Counterproliferation of Weapons of Mass Destruction (CP). SOF are organized, trained, and equipped specifically to accomplish these nine tasks.

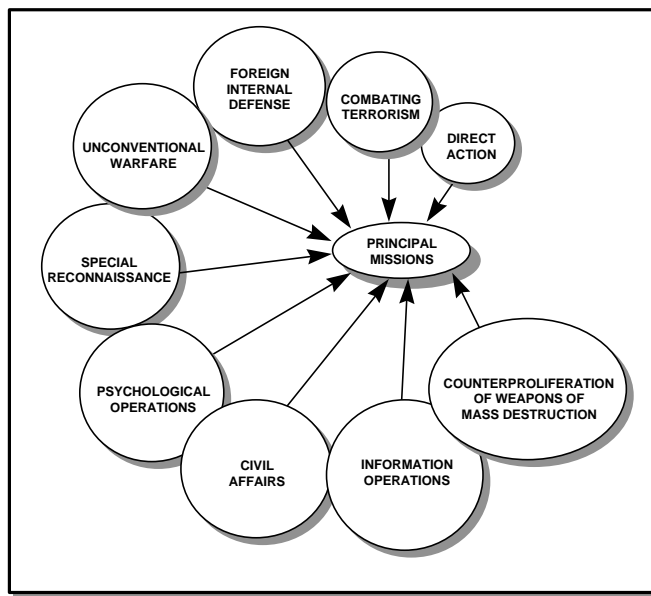


Figure 1-1. Special Operations Principal Missions

Direct Action (DA)

DA operations are short duration strikes and other small scale offensive operations principally undertaken by SOF to seize, destroy, capture, recover, or inflict damage on designated personnel or material. In the conduct of these operations, SOF may employ raid, ambush, or direct assault tactics; emplace mines and other munitions; conduct stand off attacks by fire from air, ground or maritime platforms; and provide terminal guidance for precision weapons, conduct independent sabotage, and anti-ship operations.



AH/MH-6 Direct Action

Combating Terrorism (CBT)

CBT is a highly specialized, resource-intensive mission. Certain SOF units maintain a high state of readiness to conduct CBT operations and possess a full range of CBT capabilities. CBT activities include: anti-terrorism (AT), counterterrorism (CT), recovery of hostages or sensitive material from terrorist organizations, attack of terrorist infrastructure, and reduction of vulnerability to terrorism.

Foreign Internal Defense (FID)

FID is participation by civilian and military agencies of a government in any of the action programs taken by another government to free and protect its society from subversion, lawlessness, and insurgency. SOF's primary contribution in this interagency activity is to organize, train, advise, and assist host nation military and paramilitary forces. The generic capabilities required for FID include: instructional skills; foreign language proficiency; area and cultural orientation; tactical skills; advanced medical skills; rudimentary construction and engineering skills; familiarity with a wide variety of demolitions, weapons, weapon systems, and communications equipment; and basic PSYOP and CA skills.

Unconventional Warfare (UW)

UW includes guerrilla warfare, subversion, sabotage, intelligence activities, evasion and escape, and other activities of a low visibility, covert, or clandestine nature. When UW is conducted independently during conflict or war, its primary focus is on political and psychological objectives. When UW operations support conventional military operations, the focus shifts to primarily military objectives.

Special Reconnaissance (SR)

SOF conduct a wide variety of information gathering activities of strategic or operational significance. Collectively, these activities are called SR. SR complements national and theater intelligence collection systems by obtaining specific, well-defined, and time-sensitive information when other systems are constrained by weather, terrain-masking, hostile countermeasures, or conflicting priorities. SR tasks include: Environmental Reconnaissance, Armed Reconnaissance (locating and attacking targets of opportunity), Coastal Patrol and Interdiction, Target and Threat Assessment, and Poststrike Reconnaissance.

Psychological Operations (PSYOP)

PSYOP induces or reinforces foreign attitudes and behaviors favorable to the originator's objectives by conducting planned operations to convey selected information to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals.

Civil Affairs (CA)

CA facilitates military operations and consolidates operational activities by assisting commanders in establishing, maintaining, influencing, or exploiting relations between military forces and civil authorities, both governmental and non-governmental, and the civilian population in a friendly, neutral, or hostile area of operation.

Information Operations (IO)

IO refers to actions taken to affect adversary information and information systems while defending one's own information and information systems. The following activities support the IO mission: DA, SR, PSYOP, CA. (DODD S-3600.1 and JP 3-13 Draft)

Counterproliferation of Weapons of Mass Destruction (CP)

CP refers to the actions taken to seize, destroy, render safe, capture, or recover weapons of mass destruction (WMD). SOF provide unique capabilities to monitor and support compliance with arms control treaties. If directed, SOF can conduct or support SR and DA missions to locate and interdict sea, land, and air shipments of dangerous materials or weapons. SOF are tasked with organizing, training, equipping, and otherwise preparing to conduct operations in support of US Government counterproliferation objectives.

SOF COLLATERAL ACTIVITIES

SOF's principal missions are enduring and will change infrequently; however, SOF's collateral activities will shift more readily because of the changing international environment. SOF frequently conducts the following Collateral Activities:

Coalition Support

Coalition Support integrates coalition units into multinational military operations by training coalition partners on tactics and techniques and providing communications. Coalition Support teams often provide the Joint Force Commander (JFC) with an accurate evaluation of the capabilities, location, and activities of coalition forces, thus facilitating JFC command and control.

Combat Search and Rescue (CSAR)

CSAR penetrates air defense systems and conducts joint air, ground, or sea operations deep within hostile or denied territory at night or in adverse weather to effect the recovery of distressed personnel during wartime or contingency operations.

Counterdrug (CD) Activities

CD activities train host nation CD forces on critical skills required to conduct small unit CD operations in order to detect, monitor, and counter the cultivation, production, and trafficking of illegal drugs.



SF Countermine Activities

Countermine (CM) Activities

CM activities reduce or eliminate the threat to noncombatants and friendly military forces posed by mines, booby-traps, and other explosive devices by training host nation forces in the location, recognition, and safe disposal of mines and other destructive devices, as well as CM program management.

Humanitarian Assistance (HA)

HA provides assistance of limited scope and duration to supplement or complement the efforts of host nation civil authorities or agencies to relieve or reduce the results of natural or manmade disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to, or loss of, property.

Security Assistance (SA)

SA provides training assistance in support of legislated programs which provide US defense articles, military training, and other defense related services by grant, loan, credit, or cash sales in furtherance of national policies or objectives.

Special Activities

Special activities consist of the planning and execution of actions abroad in support of national foreign policy objectives so that the role of the US government is not apparent or acknowledged publicly. These activities are subject to limitations imposed by Executive Order and in conjunction with a Presidential finding and congressional oversight.

CHAPTER 2

SPECIAL OPERATIONS FORCE STRUCTURE

UNITED STATES SPECIAL OPERATIONS COMMAND (USSOCOM)

USSOCOM was formally established as a unified combatant command at MacDill AFB, FL, on 16 April 1987, and commanded by a four star general officer with the title of Commander in Chief, United States Special Operations Command (USCINCSOC). All SOF of the Army, Navy, and Air Force based in the United States are placed under USCINCSOC's combatant command. USSOCOM has three service component commands: Army Special Operations Command (USASOC) Ft. Bragg, NC; Naval Special Warfare Command (NAVSPECWARCOM) Coronado, CA; Air Force Special Operations Command (AFSOC) Hurlburt Field, FL; and one sub-unified command, Joint Special Operations Command (JSOC) Ft. Bragg, NC. USSOCOM exists to provide special operations forces to the National Command Authority (NCA), regional combatant commanders, and American ambassadors and their country teams for successful conduct of special operations during both peace and war. USSOCOM prepares SOF to successfully conduct special operations, including civil affairs and psychological operations. Responsibilities of USSOCOM include:

- Readiness of assigned forces and monitoring the readiness of overseas SOF.
- Monitoring the professional development of all SOF personnel.
- Developing joint SOF tactics, techniques, and procedures.
- Conducting specialized courses of instruction.
- Training assigned forces.
- Executing its own program and budget (its funding comes directly from Congress and not from the Services).
- Conducting research, development, and acquisition of special operations peculiar items.

Theater Special Operations Commands (SOCs)

Since 1988 each of the theater unified commands have established a separate Special Operations Command (SOC) to meet its theater-unique special operations requirements. As subordinate unified commands, the theater SOCs provide the planning, preparation, and command and control of SOF from the Army, Navy, and Air Force. They ensure that SOF strategic capabilities are fully employed and that SOF are fully synchronized with conventional military operations, when applicable.

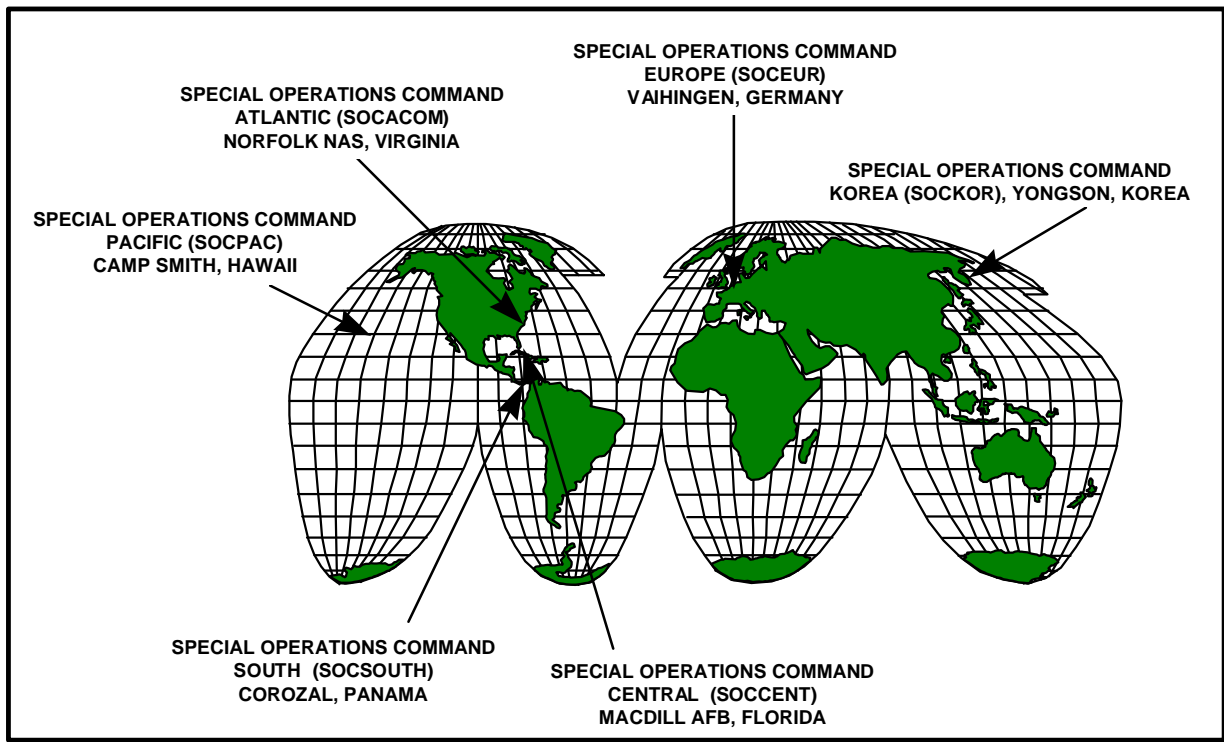
Theater SOCs offer several advantages to regional commanders. As peacetime elements, the SOCs are the nucleus around which a Joint Special Operations Task Force (JSOTF) can be structured. They provide a clear chain of command for in-theater SOF as well as the staff expertise to plan, conduct, and support joint SO in the theater's area of responsibility. These special operations may include General Purpose Forces (GPF) under operational control

(OPCON) to a SOC. Theater SOCs normally exercise OPCON of SOF (except PSYOP and CA) within each geographic Commander in Chief's (CINC) area of responsibility. Additionally, the SOCs ensure that SOF personnel fully participate in theater mission planning and that theater component commanders are thoroughly familiar with SOF operational and support requirements and capabilities. While USCINCSOC provides funding and personnel for the SOCs, each SOC reports directly to the geographic CINC.

SOCs, established as sub-unified commands of the combatant unified commands, are the geographic CINCs' sources of expertise in all areas of special operations, providing the CINCs with a separate element to plan and control the employment of joint SOF in military operations. Additionally, SOCs provide the nucleus for the establishment of a joint special operations task force (JSOTF), when a joint task force is formed. There are six SOCs supporting geographic CINCs worldwide (see Figure 2-1). They are as follows:

- Special Operations Command Atlantic Command (SOCACOM)
- Special Operations Command Central (SOCCENT)
- Special Operations Command Europe (SOCEUR)
- Special Operations Command Pacific (SOCPAC)
- Special Operations Command Korea (SOCKOR)
- Special Operations Command South (SOCSOUTH)

Figure 2-1. Worldwide Special Operations Command Locations



Special Operations Command, Atlantic Command (SOCACOM)

SOCACOM is a subordinate unified command of US Atlantic Command (USACOM) headquartered in Norfolk, Virginia. SOCACOM is responsible for planning and conducting joint/multinational special operations throughout USACOM. The SOCACOM staff forms the nucleus of a JSOTF HQ when directed.

SOCACOM staff operates in peacetime as a traditional joint headquarters, with a Command Group and five numbered functional directorates. The only variation from a standard joint headquarters is that the SOJ3 and SOJ5 are combined. In contingency and wartime, the SOC's organizational structure would grow to a Command Group and six numbered functional directorates with the SOJ3 and SOJ5 in separate directorates. Specific SOCACOM missions include:

- Assist and advise in all matters pertaining to special operations unit/assets in US Atlantic Command.
- Ensure readiness of assigned SOF and those SOF allocated for contingency planning.
- Implement and support CINCUSACOM-directed host country training, nation building and professional military-to-military contacts with host-nation armed forces.
- Conduct Joint Chief of Staff (JCS)-directed exercises.
- Plan, conduct, and evaluate other joint/multinational exercises, Mobile Training Team (MTT) operations, Joint Combined Exchange for Training (JCETs), and Deployment for Training (DFT) in support of theater, regional, and country strategies.
- Develop support plans and annexes for USACOM OPLANs/CONPLANs.

Special Operations Command, Central (SOCCENT)

SOCCENT, headquartered at MacDill AFB, Florida, is a subordinate unified command of US Central Command (USCENTCOM). It is responsible for planning special operations throughout the USCENTCOM area of responsibility (AOR); planning and conducting peacetime joint/combined special operations training exercises; and orchestrating command and control of peacetime and wartime special operations as directed. SOCCENT exercises operational control of assigned and attached SOF which deploy for the execution of training and for operational missions in the USCENTCOM AOR as directed by USCINCCENT (see Figure 2-2). When directed by USCINCCENT, SOCCENT forms the nucleus of a JSOTF. **Note: 05S and 068E in figure 2-2 denote latitudinal and longitudinal littoral boundaries of the CENTCOM AOR.**

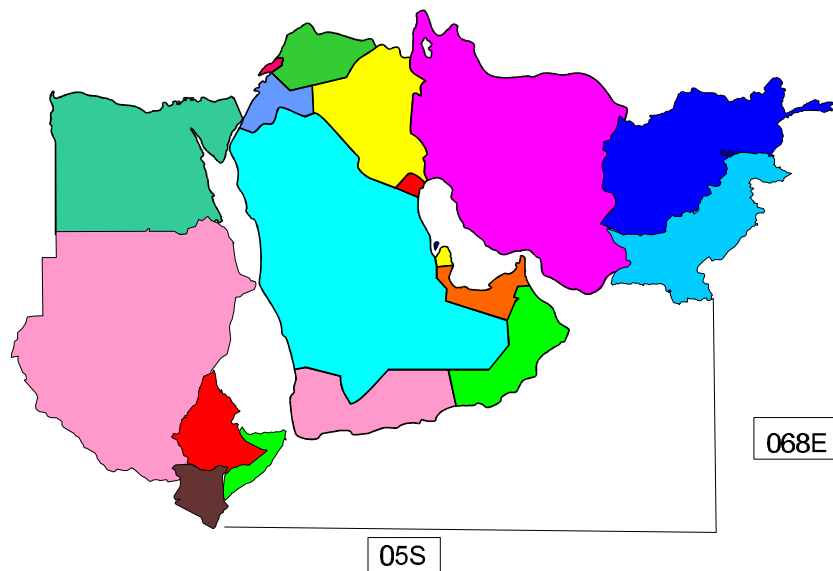


Figure 2-2. SOCCENT

SOCCENT is organized and aligned along traditional joint operational lines with a command group, six numbered/functional directorates (J1 through J6) and a headquarters commandant section.

Specific SOCCENT mission tasks include:

- Assist and advise USCINCCENT on all matters pertaining to special operations in the USCENTCOM AOR.
- Implement and support USCINCCENT-directed host country training, nation building, and professional military-to-military contacts with host nation armed forces.
- Conduct JCS directed exercises.
- Plan and conduct humanitarian assistance and civic actions with countries receptive to US military presence.
- Plan, conduct, and evaluate other joint exercises, MTTs, DFTs, and JCETs in support of theater, regional, and country strategies.

Special Operations Command, Europe (SOCEUR)

SOCEUR is a subordinate unified command of US European Command (USEUCOM), headquartered at Vaihingen, Germany. Commander SOCEUR (COMSOCEUR) functions as the director of the European Command Special Operations Directorate and is one of five commanders in the US European AOR who may be designated to establish or lead a European Joint Task Force (JTF). In either role COMSOCEUR reports directly to US Commander in Chief Europe (USCINCEUR). SOCEUR has OPCON for Army, Navy, and Air Force special operations forces which deploy for the execution of training and operational missions in the US European Command (USEUCOM) AOR (see Figure 2-3). During selected wartime and contingency operations, COMSOCEUR is routinely tasked by USCINCEUR to establish a JSOTF, and deploy to a forward location(s), to provide command, control, communications, and intelligence (C3I) for assigned US and allied SOF as required.

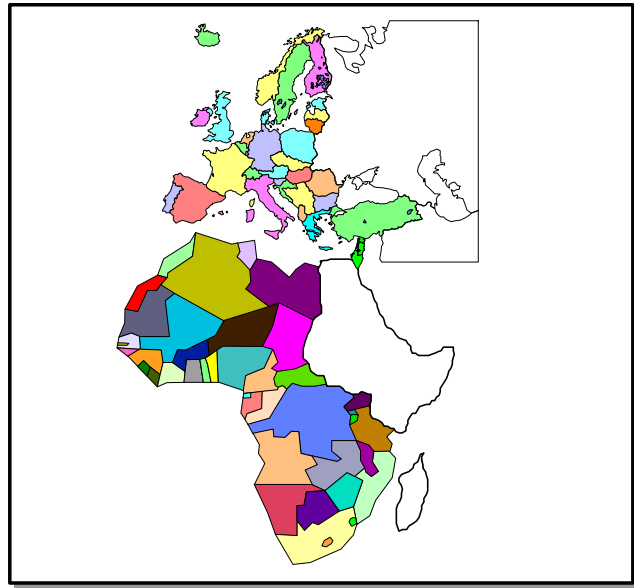


Figure 2-3. SOCEUR

SOCEUR is organized as a conventional joint staff with a command group and six numbered functional directorates. SOCEUR exercises control of one Army Special Forces Battalion, one Air Force Special Operations Group, three Air Force Special Operations Squadrons, one Air Force Special Tactics Squadron, and two Naval Special Warfare Units. Specific SOCEUR mission tasks include:

- Assist and advise in all matters pertaining to special operations units/assets in USEUCOM AOR.
- Ensure readiness of assigned SOF and those SOF allocated for contingency planning.
- Implement and support USCINCEUR directed host country training and professional military-to-military contacts with European, Partnership for Peace, and African armed forces.
- Conduct JCS directed exercises.
- Plan, conduct, and evaluate MTTs, JCETs, and DFTs, in support of regional, theater, and country campaign plans.
- Develop supporting plans and annexes for USEUCOM OPLANS, CONPLANS and functional USCINCEUR directed operational tasks.
- Coordinate Special Forces personnel support to US Embassies in Europe and the Newly Independent States of the former Soviet Union.

Special Operations Command, Pacific (SOCPAC)

SOCPAC is a US Pacific Command (USPACOM) subordinate unified command with headquarters collocated with USPACOM at Camp Smith, Hawaii. SOCPAC conducts theater special operations; exercises OPCON of in-theater and apportioned SOF; and is executive agent for all special operations, less CA/PSYOP. COMSOCPAC, is the special advisor for special operations on the USCINCPAC staff. The Staff is organized with a command group, six directorates (SOJ1 - SOJ6), and is augmented by the Joint Intelligence Support Element (JISE/JICPAC) and the 112th Signal Battalion, Signal Detachment, Hawaii. SOCPAC may be rapidly deployed as JTF 510; may be tasked to form a JSOTF under another USCINCPAC JTF; and may be tasked to integrate with allies to form a combined special operations staff.

SOCPAC assigned forces comprise one Army Special Forces Battalion, one Air Force Special Operations Group, three Air Force Special Operations Squadrons, one Air Force Special Tactics Squadron, and one Naval Special Warfare Unit. COMSOCPAC is designated as the wartime SOF Component Commander for United States Forces Korea and Deputy Commander, Combined Unconventional Warfare Task Force Combined Forces Command Korea. **Note: Numerical data embedded in figure 2-4 is latitudinal and longitudinal boundaries of the PACOM AOR.**

Specific SOCPAC mission tasks include:

- Assist and advise USPACOM on all matters pertaining to SO units/assets in the US Pacific Command AOR (except Korea) (see Figure 2-4).
- Ensure readiness of assigned SOF and those SOF allocated for contingency planning.
- Implement and support USPACOM-directed host country training, nation building assistance, and professional military-to-military contacts with host nation armed forces.
- Support other USCINCPAC peacetime operations such as counterdrug, humanitarian, and disaster assistance.
- USPACOM Executive agent (EA) for demining and Integrated Survey Program (ISP).
- Conduct JCS and theater-directed exercises.
- Plan, conduct, and evaluate other joint exercises, MTTs, JCETs, and DFTs, in support of theater, regional, and country strategies.
- Develop supporting plans and annexes for USPACOM OPLANS and CONPLANS.

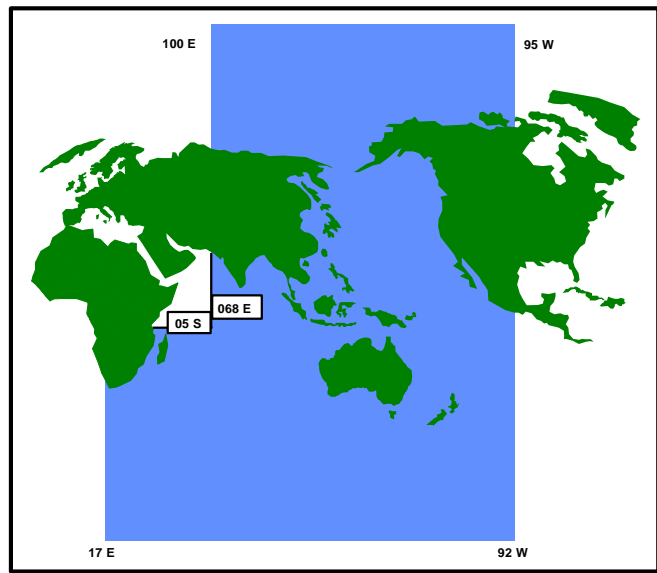


Figure 2-4 SOCPAC

Special Operations Command, Korea (SOCKOR)

Operating under armistice conditions in Yongson, Korea, Special Operations Command, Korea (SOCKOR) is the special operations functional component command of US Forces Korea (USFK). SOCKOR is responsible for planning, coordinating, and conducting joint and combined special operations in the Commander, US Forces Korea (COMUSKOREA) area of operations (AO) in support of the Commander in Chief, United Nations Command/Republic of Korea (ROK)-United States Combined Forces Command (CINC UNC-FNC) (see Figure 2-5).



Figure 2-5. SOCKOR

In armistice, SOCKOR is established as a traditional joint headquarters with a command group and six directorates. It exercises OPCON of the Special Forces Detachment Korea, and tactical control (TACON) of other US SOF units (less CA and PSYOP) training in Korea. Focused primarily on deterrence and preparation for warfighting, SOCKOR is the only theater SOC where US and allied SOF are institutionally organized for combined special operations. If hostilities resume in Korea, elements of SOCKOR and the ROK Army Special Warfare Command, Republic of Korea Naval (ROKN) Special Warfare Squadron, and the Republic of Korea Air Force (ROKAF) Special Operations Squadron will establish the Combined Forces Command (CFC) Combined Unconventional Warfare Task Force (CUWTF). CUWTF is commanded by a ROK Lieutenant General, with the SOCKOR Commander as his Deputy.

Special Operations Command, Southern Command (SOCSOUTH)

SOCSOUTH is a subordinate unified command of US Southern Command (USSOUTHCOM), headquartered at Miami, Florida. SOCSOUTH headquarters is located at Corozal, Panama. SOCSOUTH has OPCON for Army, Navy, and Air Force SOF which deploy forward for the execution of training and for operational missions in the USSOUTHCOM AOR (see Figure 2-6). SOCSOUTH provides command and control for Army and Air Force SOF other than CA and PSYOP. SOCSOUTH forms and deploys a JSOTF headquarters providing C3I connectivity during contingencies and, when directed, has forces OPCON to SOCSOUTH; One Army Special Forces Company, one Army Special Operations Aviation company, one Naval Special Warfare Unit (NSWU), and one Special Boat Unit (SBU). In peacetime, SOCSOUTH is organized as a conventional joint staff with a command group and seven numbered functional directorates J1 through J6 and J8. In wartime, the SOC adds an eighth functional directorate for the headquarters commandant. **Note: Numerical data embedded in figure 2-6 are latitudinal and longitudinal boundaries of SOUTHCOM's AOR.**

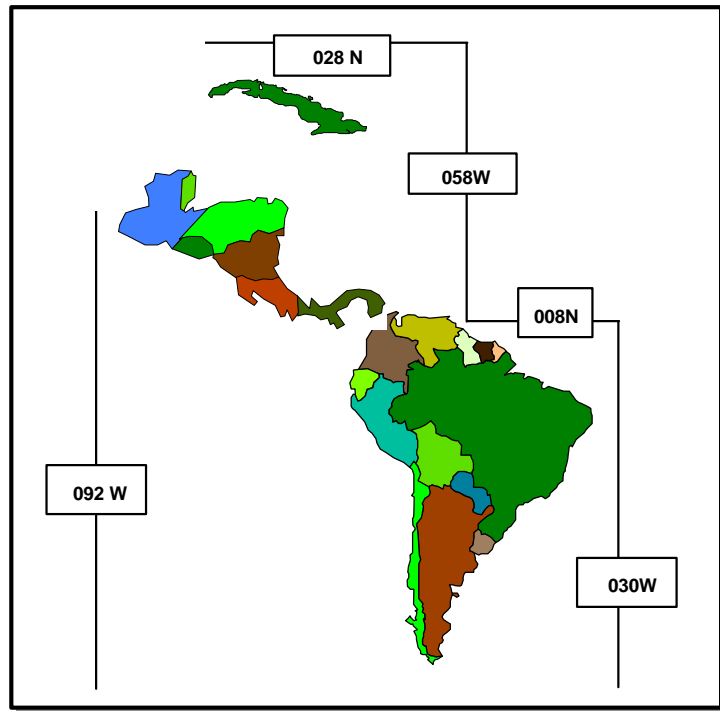


Figure 2-6. SOCSOUTH

Specific SOCSOUTH mission tasks include:

- Assist and advise in all matters pertaining to SO units/assets in the SOUTHCOM AOR.
- Ensure readiness of assigned SOF and those SOF allocated for contingency planning.
- Implement and support USSOUTHCOM-directed host country training, nation assistance, and professional military-to-military contacts with Latin American armed forces.
- Conduct JCS-directed exercises.
- Plan, conduct, and evaluate other joint exercises, JCETs, DFTs, and MTTs, for regional, theater, and country strategies.
- Develop supporting plans and annexes for USSOUTHCOM CONPLANs.
- Assist USSOUTHCOM staff in Panama Canal Treaty implementation planning and execution.

USSOCOM Organizations

United States Special Operations Command (USSOCOM), headquartered at MacDill AFB, FL, is a unified command of active duty and reserve personnel (see Figure 2-7). The active duty SOF elements assigned to USCINCSOC are organized into three service component commands and one sub-unified command. Army forces are structured under the US Army Special Operations Command (USASOC) headquartered at Ft. Bragg, NC; US Air Force special operations personnel are grouped under the Air Force Special Operations Command (AFSOC), headquartered at Hurlburt Field, FL; and Navy SOF elements are organized under the Navy Special Warfare Command (NAVSPECWARCOM), located at Coronado, CA. The sub-unified command is the Joint Special Operations Command (JSOC) at Ft. Bragg, NC.

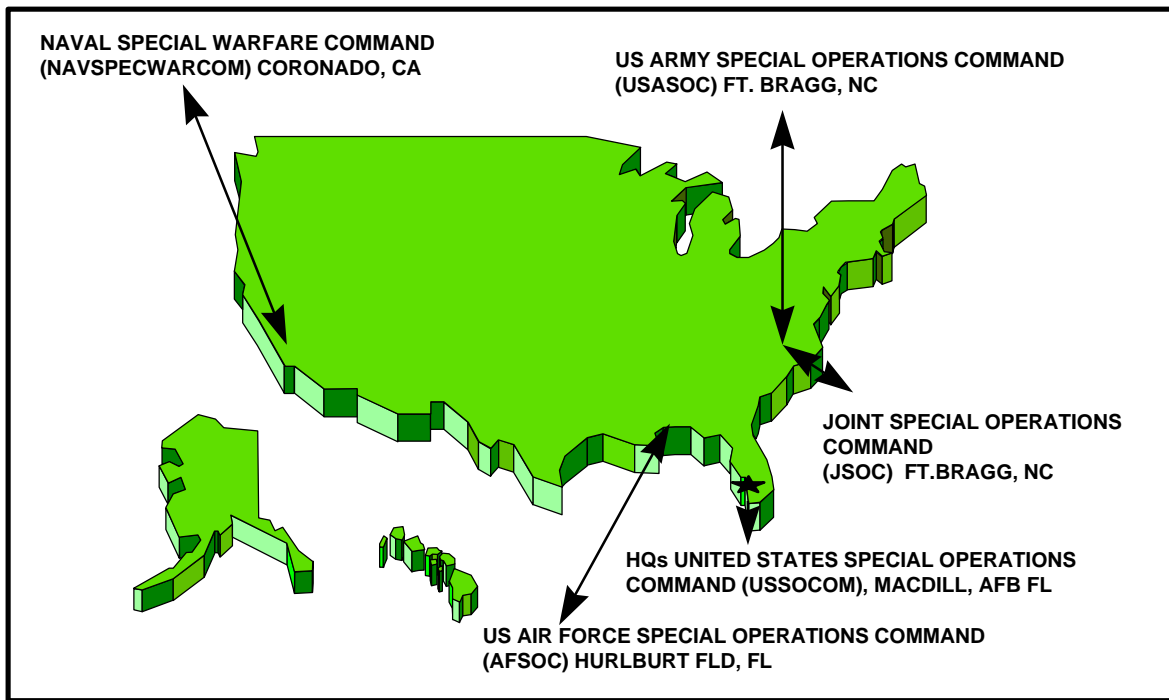


Figure 2-7. Headquarters USSOCOM and Special Operations Subordinate Command Locations

NOTE

Further information on Army, Naval, and Air Force Special Operations Components can be found in Chapters 3, 4, and 5 respectively.

Joint Special Operations Command (JSOC)

JSOC was established in 1980 and is located at Fort Bragg, NC. JSOC is a joint headquarters designed to study special operations requirements and techniques; ensure interoperability and equipment standardization; plan and conduct joint special operations exercises and training; and develop joint special operations tactics.

SOF Operational Command and Control

During operations, three types of SOF joint task forces (JTFs) may be formed to support a joint force commander (JFC) in the command and control of assigned SOF: the Joint Special Operations Task Force (JSOTF), the Joint Psychological Operations Task Force (JPOTF), and the Joint Civil Military Operations Task Force (JCMOTF) (see Figure 2-8). These JTFs are organized along the lines of a conventional joint task force and normally are established to accomplish a specific mission or conduct a campaign of limited duration. SOF JTFs are flexible in size, composition, and duration of establishment. A SOF JTF may be small and temporary, or larger and more enduring, depending on the national objective or theater mission assigned.

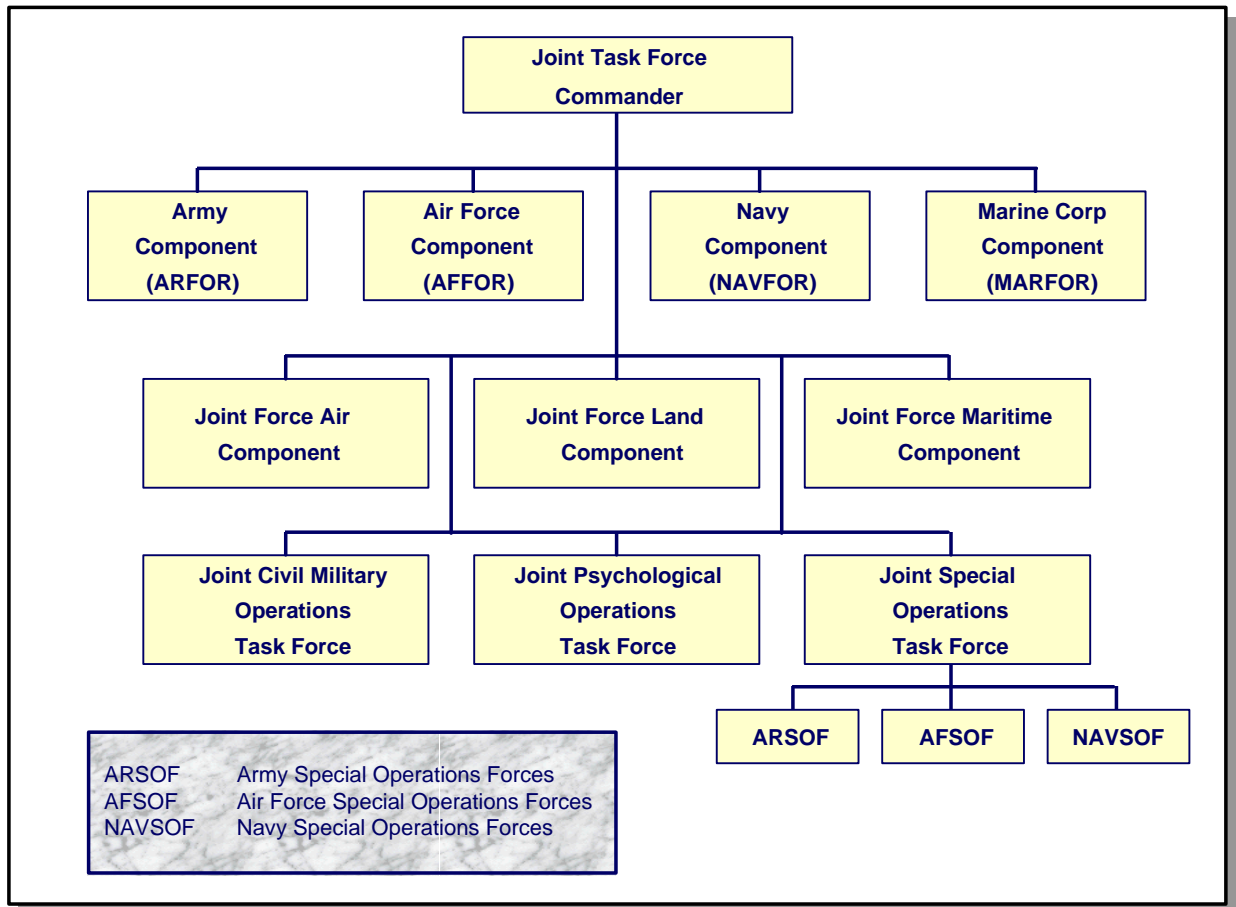


Figure 2-8. Generic Organization of a JTF

Joint Special Operations Task Force (JSOTF)

A JSOTF is a temporary joint SOF headquarters established, by the NCA or a Joint Force Commander (JFC), to accomplish a specific mission or to control SOF in a specific theater of operations. The JSOTF is composed of special operations units from more than one Service. The JSOTF may have conventional non-special operations units assigned or attached to support the conduct of specific missions.

Creation of and Transition to a JSOTF

Higher command may “stand up” a JSOTF in a variety of ways. Under most circumstances, a regional CINC will direct his SOC to form a JSOTF. That JSOTF might be deployed and employed in advance of the JTF or multinational force of which it will eventually become a part, or the JSOTF and the multinational force might be organized concurrently.

Generic Organization of a Joint Special Operations Task Force

A JSOTF HQ, or a JSOTF, does not have a fixed organization; it is task organized. While the headquarters normally will be able to perform normal command and staff functions, it may rely on non-SOF elements for certain staff activities (see Figure 2-9). JSOTF HQs vary in size as well as scope of mission. Personnel within the JSOTFs have numbered from less than 20 to more than 200. A JSOTF is an organization flexible in both size and composition, and that flexibility provides its primary utility.

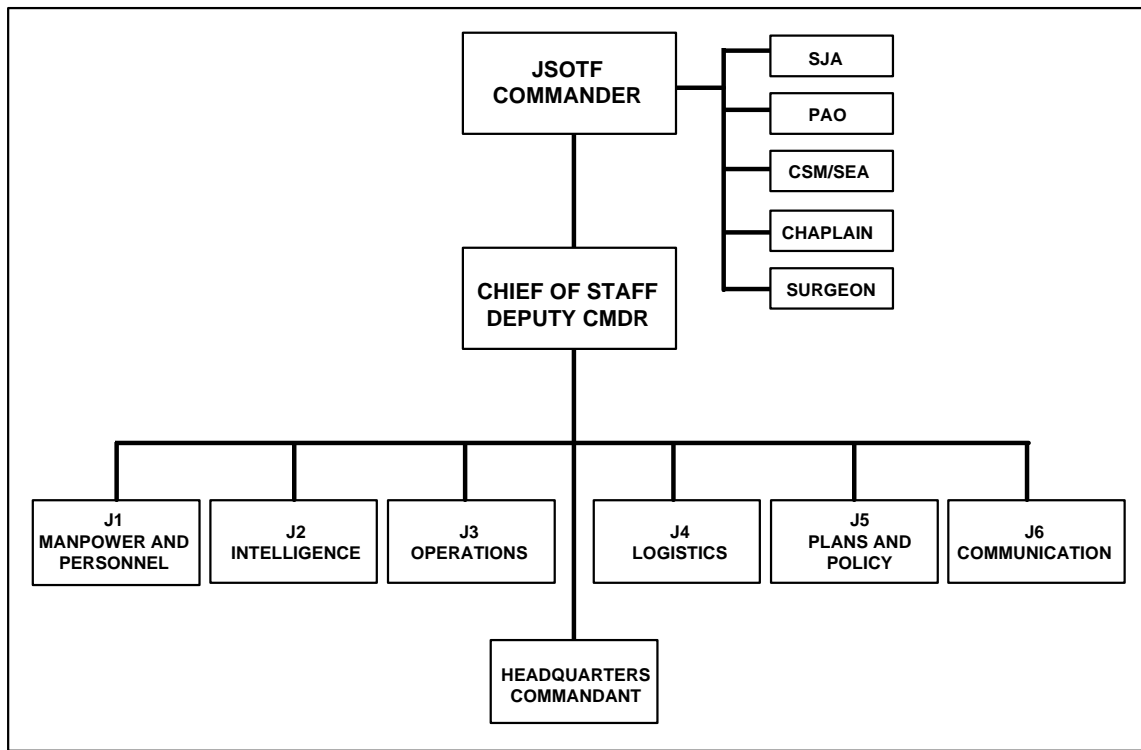


Figure 2-9. Generic Organization of a JSOTF Headquarters

A JSOTF is organized in a manner similar to conventional task forces, and JSOTF HQs normally are organized internally along service component or functional lines (i.e., J1 through J6, and ARSOF, NAVSOF, AFSOF etc.). JSOTFs normally are organized to meet a specific SO mission or an operation of limited duration, although they may be formed as standing organizations, depending upon NCA, theater command, or JTF guidance. The establishment of a JSOTF is appropriate when SOF command and control (C2) requirements exceed the capabilities of the theater SOC staff. JSOTF HQs normally are formed around elements from the theater SOC or an existing SOF unit with augmentation from other Service SOF. Also, a JSOTF may be deployed

as a complete package from outside the theater. This can be done to provide an additional JSOTF for the regional CINC or to relieve the SOC from the responsibility of organizing a JSOTF.

When subordinate to a Joint Task Force Commander, other than the theater SOC, the JSOTF commander serves as the Joint Force Special Operations Component Commander (JFSOCC). Normally the JFSOCC exercises day-to-day C2 of assigned or attached SOF. The JFSOCC allocates forces against strategic or operational tasks and supports other JTF component commanders based on guidance from the Commander, Joint Task Force (CJTF). Additionally, other responsibilities of the JFSOCC are to:

- Make recommendations on the proper employment of special operations forces and assets.
- Plan and coordinate special operations.
- Synchronize the conduct of special operations with the other component commanders.

Deconfliction, coordination, and transfer of forces are always critical concerns for SO commanders, regardless of organizational status. Deconfliction and coordination activities routinely include target deconfliction, communications frequency allocation, surface and airspace deconfliction, fire support coordination, and coordination for logistics support.

SOF must be compatible with conventional forces that either host or support their activities. This is especially true during time-critical contingency planning operations. For example, if SOF are operating from naval surface vessels during forced-entry operations, they must be prepared to function compatibly with the host vessel. Weapons and communications must be deconflicted with ship systems, and SOF helicopters must be compatible with shipboard fuel systems. Likewise, the conventional force commander must be sensitive to his own operations, which may require modification so as not to inhibit the operation of SOF.

JSOTF Support Relationships

In many contingency operations, JSOTF HQs have been established for command and control. SOF have been deployed, and employed well in advance of conventional force elements. Coordinating the transition from special operations to conventional operations, when ordered, is crucial. Such coordination of conventional and special operations ensures that the timing and tempo of the overall unified campaign is maintained. Only the NCA can authorize and direct the assignment of forces to combatant commands or their transfer between combatant commands. When transfer of forces is permanent, the forces are reassigned. When transfer of forces is temporary, the forces may be either reassigned or attached. If the forces are reassigned, the gaining combatant commander exercises Combatant Command (COCOM) of the reassigned force. If the forces are attached, the NCA normally specifies in the deployment order that the gaining combatant commander will exercise OPCON of the attached force. When USSOCOM forces deploy from CONUS into a theater for a specific short-duration mission, these forces are normally attached to the theater combatant commander and may be placed OPCON to the JFSOCC. This requires extensive coordination when the mission is planned out of theater. Because USSOCOM must prepare the forces, it is vital that the JFSOCC clearly communicate the theater combatant commander's requirements. The JFSOCC assists the theater combatant commander in charge of operational control of SOF from USSOCOM to theater control, coordinating transfer to theater C4I structure, and arranging in-theater support, to include staging

facilities. This may require coordination with other theater combatant commanders when those facilities lie within their AORs. JFSOCC planning must ultimately include force recovery and redeployment.

Joint Psychological Operations Task Force (JPOTF)

A JPOTF is composed of psychological operations units from more than one service, formed to carry out PSYOP in support of a joint force commander's campaign or other contingencies. A JPOTF is a temporary joint headquarters established by the combatant commander or a Joint Force Commander (JFC) to accomplish a specific mission or to control PSYOP forces in a specific theater of operations. The JPOTF assists the JFC in developing strategic, operational, and tactical PSYOP plans for a theater campaign or other operations. The JPOTF may be composed of PSYOP units, assigned or attached, from more than one service or units from one service to support the CJTF. The JPOTF may have a staff comprised of staff officers from multiple services or from only one service.

Creation of and Transition to a JPOTF

The scale of an operation generally dictates the organization of PSYOP forces. The PSYOP organization may vary in size depending on the nature of the operation, the capability of available forces, and the supported commander's assessment of the PSYOP requirement.



A PSYOP Leaflet From Operation Desert Shield/Storm

The supported commander may request a PSYOP assessment team (POAT) to assist him in developing the PSYOP objectives and to advise him on the appropriate component mix of assets. If the POAT can accomplish the necessary planning to assist tactical commanders executing PSYOP activities, no further PSYOP forces are likely to be required.

The supported commander may “stand up” a JPOTF in a variety of ways. Under most circumstances, a geographic combatant commander (the supported commander) or CJTF will form a JPOTF. The JPOTF could be assigned anywhere in the JFC structure; it normally remains under the control of the JFC to provide a

centralized PSYOP focus. Seldom, if at all, will the JPOTF be deployed and employed in advance of the JTF or multinational force of which it will eventually become a part. The JPOTF and a multinational force may be organized concurrently.

During full mobilization, the entire US military PSYOP capability becomes available for employment by the supported combatant commander. PSYOP units apportioned for theater planning purposes and available for employment are identified in Annex D (S) to the Joint Strategic Capabilities Plan (JSCP). Presently, a significant portion of PSYOP forces are maintained in the Reserve Component. Early identification of RC PSYOP requirements by the POAT is essential to ensure timely RC activation, processing, and training, if required. Both active and reserve forces which provide PSYOP capability should be identified in the theater time-phased force and deployment data (TPFDD) to ensure theater PSYOP objectives and operations are not delayed.

Generic Organization of a Joint Psychological Operations Task Force

Because it is task organized to fit the mission, A JPOTF does not have a fixed organization. While the headquarters usually will be able to perform most normal command and staff functions, it may sometimes rely on non-PSYOP elements for certain staff activities (see Figure 2-10). The JPOTF varies in size depending on the scope of mission. During past operations, personnel within the JPOTF have numbered from less than 20 to more than 400. A JPOTF is an organization flexible in both size and composition, and this aspect provides its primary utility.

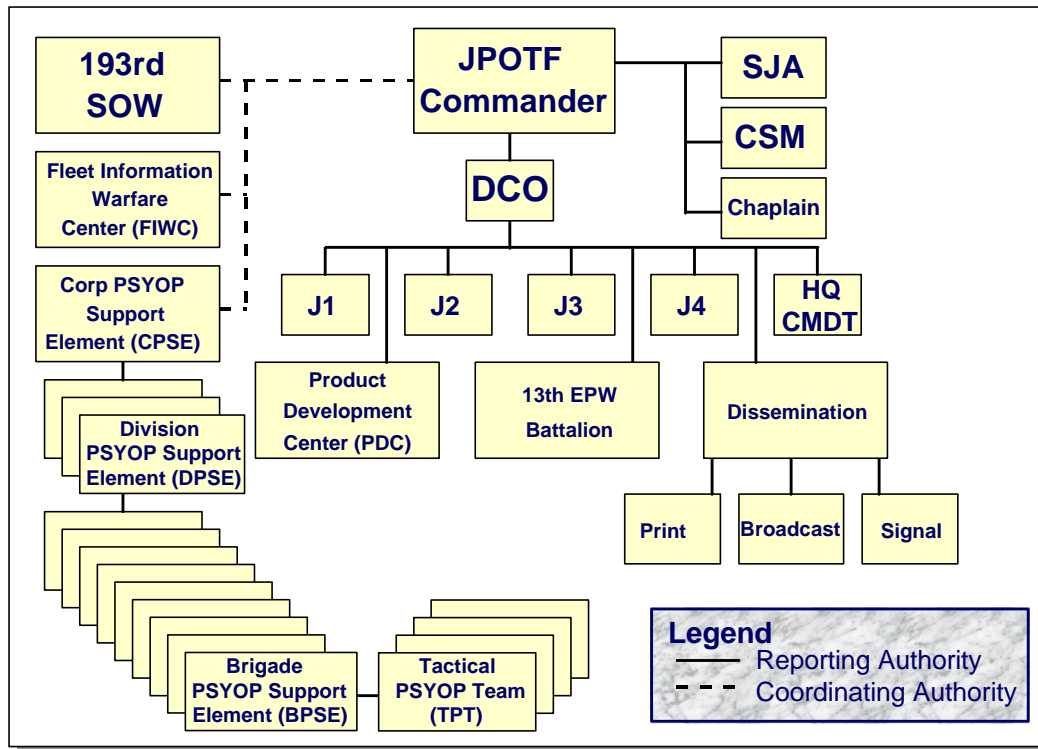


Figure 2-10. Generic Organization of a JPOTF Headquarters

A JPOTF is organized in a manner similar to conventional task forces in that it is organized internally along functional lines (i.e., J1 through J4). A JPOTF normally is organized to meet a

specific PSYOP mission. The establishment of a JPOTF is appropriate when PSYOP C2 requirements exceed the capabilities of the theater commander's staff, or JTF staff. The JPOTF HQs are formed around elements from an existing PSYOP unit with augmentation from other Services. Usually, a JPOTF will be deployed as a complete package from outside the theater.

When subordinate to a Joint Task Force Commander, the JPOTF commander exercises day-to-day C2 of assigned or attached PSYOP forces. The COMJPOTF allocates forces against strategic or operational tasks and supports other JTF component commanders based on guidance from the Commander, Joint Task Force (COMJTF). Additionally, other responsibilities of the COMJPOTF are to:

- Advise the COMJTF on PSYOP.
- Conduct Joint PSYOP Planning and Execution.
- Issue planning guidance.
- Analyze various courses of action.
- Produce Joint PSYOP products.
- Coordinate with the other subordinate task forces and components to ensure the most efficient support is provided to the COMJTF.
- Conduct Joint PSYOP dissemination operations.
- Evaluate the results of Joint PSYOP.
- Conduct liaison with host nation agencies and other USG organizations.
- Establish combat ID SOPs and other directives based on COMJTF guidance.

Joint PSYOP Command And Control

The NCA issues national security policy through directives and statements. During peacetime, the Secretary of Defense (or his designated representatives) translates national security policy into military policy. Because of the nature of the psychological dimension, all policy matters tend to impact upon PSYOP. During war, policy flows directly from the NCA through the Chairman of the Joint Chief of Staff to the combatant commanders. The combatant commander is responsible for the centralized direction and conduct of PSYOP within his operational area. Early and full PSYOP support to the supported commander is critical throughout the crisis action planning process.

In any contingency operation, the JPOTF HQs has been established for command and control of PSYOP forces. PSYOP forces have been deployed, and employed, in support of both conventional force elements and Special Operations Forces (SOF). USCINCSOC exercises combatant command (command authority) (COCOM) of all dedicated Army and Air Force PSYOP forces in the continental United States (CONUS). In fulfilling this responsibility, USCINCSOC coordinates with the Chairman of the Joint Chiefs of Staff, Chiefs and combatant commanders to ensure all PSYOP and support requirements are addressed.

When USSOCOM forces deploy from CONUS into a theater for a specific short-duration mission, these forces are normally attached to the theater combatant commander and may be placed OPCON to the JFC. If the forces are attached, the NCA normally specifies in the deployment order that the gaining combatant commander will exercise OPCON of the attached force. This requires extensive coordination. Because USSOCOM must prepare the forces, it is

vital that the JFC clearly communicate the theater combatant commander's requirements. The JFC assists the theater combatant commander in charge of operational control of PSYOP from USSOCOM to theater control, coordinating transfer to theater C4I structure and arranging in-theater support, to include staging facilities. This may require coordination with other theater combatant commanders when those facilities lie within their AORs. JFC planning must ultimately include force recovery and redeployment. Additionally, significant PSYOP activity normally requires a JPOTF to coordinate and deconflict execution of the JFC's plan.

Command and Control of PSYOP Assets

When a JPOTF is established, tactical PSYOP forces are placed in direct support of maneuver elements. The COMJTF will attach and detach tactical PSYOP forces with maneuver forces as required to support the JTF mission. Dissemination forces operate in general support of the JFC with tactical control by the JPOTF commander. Multipurpose assets that are primarily PSYOP platforms, such as COMMANDO SOLO, normally remain OPCON to the Joint Special Operations Component Commander (JSOCC) or the COMJSOTF, with tactical control (TACON) to the JPOTF commander.

Psychological Operations Mission

Psychological Operations are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign government, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives.



A Captured Iraqi Soldier Displays a PSYOP Leaflet During Operation Desert Storm

Psychological Operations are conducted across the operational continuum by supporting national security objectives during peacetime, contingencies, and war. They provide commanders a critical, force-multiplying capability that can be used at tactical, operational, and strategic levels of operations.

Strategic Psychological Operations

Strategic psychological operations are planned psychological activities in peace and war, which normally pursue objectives to gain the support and cooperation of friendly and neutral

countries and to reduce the will and the capacity of hostile or potentially hostile countries to wage war. Global in nature, they may be directed toward large audiences or at key communicators.

Operational Psychological Operations

Operational psychological operations are conducted prior to, during war or conflict, and at the conclusion of open hostilities in a defined geographic area to promote the effectiveness of the area commander's campaigns and strategies. They are directed at regional target audiences and planned to change audience behavior more rapidly than strategic PSYOP. Operational PSYOP demonstrate characteristics of both strategic and tactical PSYOP and are the bridge that links them together.



PSYOP Soldiers Deliver the "Rajo" Newspaper During Operation Restore Hope

In addition to supporting commanders, psychological operations provide interagency support to other US government agencies. In operations ranging from humanitarian assistance to counterdrug, psychological operations enhance the impact of actions taken by those agencies. Their activities can be used to spread information about ongoing programs and to gain support from the local populace.

Some PSYOP capabilities include:

- Amplifying the effects of military operations.
- Informing audiences in denied areas.
- Overcoming censorship, illiteracy, or interrupted communications systems.
- Giving guidance or reassurance to isolated or disorganized audiences.
- Targeting opponent audiences to diminish morale or reduce the will to resist.
- Sustaining the morale of resistance fighters.
- Exploiting ethnic, cultural, religious, or economic differences.
- Giving opponent audiences alternatives to continued conflict.
- Influencing local support for insurgents.
- Supporting deception operations.
- Projecting a favorable image of US actions.
- Using face-to-face communications, key communicators, and mass media to engage every practical avenue to channel the target audience's behavior.



Tactical PSYOP Soldiers Conduct a Loudspeaker Mission During Operation Restore Hope

Tactical Psychological Operations

Conducted in the area assigned a tactical commander during conflict and war to support the tactical mission against opposing forces. Tactical PSYOP is associated with “Face-to-Face” operations in support of maneuver units within the theater.

Tactical PSYOP Support at corps, division, and brigade levels provides the maneuver commander with a robust tactical dissemination capability. As the approval authority for

PSYOP is maintained at echelons above corps, it is envisioned that the ground commander will receive operational and tactical PSYOP support (leaflets and broadcast operations) across his area of influence. The theater PSYOP plan includes this operational and tactical support and remains highly visible and thoroughly integrated into the commander’s tactical plan. PSYOP staff officers at all levels will be made fully aware of the theater PSYOP campaign plan so that the supported commander retains a full concept of the theater PSYOP effort. However, development and coordination of campaigns and the production of PSYOP products does not occur at the corps, division, or brigade levels. The PSYOP assets assigned to these levels provide a tactical dissemination capability across the commanders’ front and have limited PSYOP product development assets.

These limited assets are designed to respond to suggested products from the maneuver commander. Upon receiving a tactical commander’s request for a product, the tactical PSYOP unit’s developmental cells develop a product within the commander’s intent. They then forward the suggested product, through PSYOP technical channels to the senior PSYOP headquarters in the theater for further development and approval. Upon approval the product is produced and forwarded to the user level for dissemination.

PSYOP Approval Process

There are strict guidelines (National Security Directive 130, US International Information Policy) that must be met before PSYOP can be initiated (Figure 2-11). Policy approval authority for peacetime PSYOP rests with the National Command Authority (NCA) or the Office of the Undersecretary of Defense for Policy and is delegated to the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict. During war, this approval may be delegated to the warfighters; i.e., theater commanders in chief (CINC) and joint task force commanders.

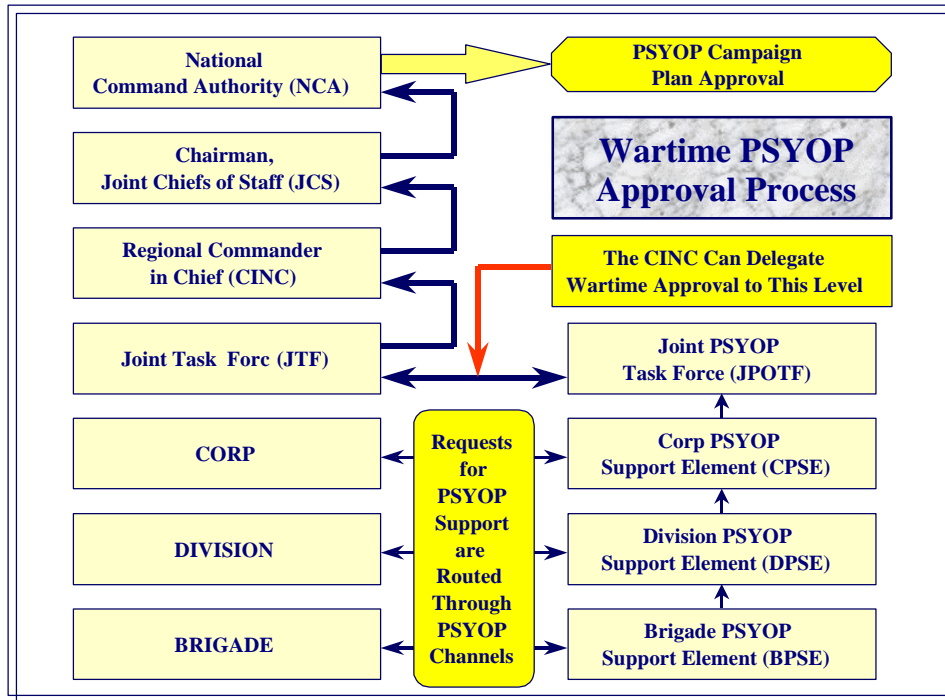


Figure 2-11. Wartime PSYOP Approval Process

Psychological Operations Forces

Each Military Service has an inherent capability to support production and/or dissemination of PSYOP products. Joint PSYOP planning guidance is contained in the JSCP, Joint Operations Planning and Execution System (JOPES), and Service doctrine. Combatant Commanders and Joint Task Force commanders should address the use of all levels of PSYOP as aspects of the overall strategy for conducting operations (see Figure 2-12).

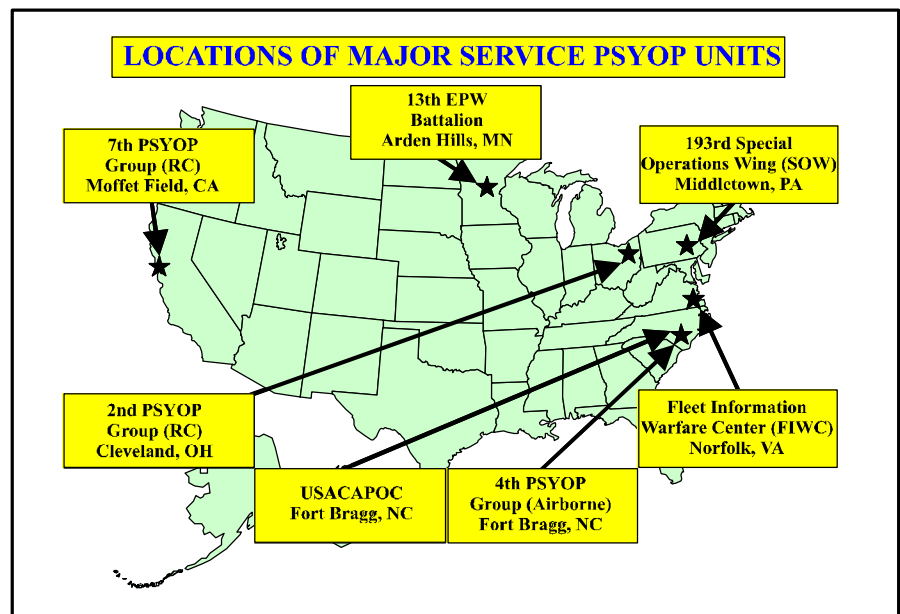


Figure 2-12. CONUS Locations of Major Service PSYOP Units

Command Relationships

Unless otherwise directed by the NCA, combatant commanders exercise Combatant Command (COCOM) over all assigned military PSYOP assets. Because of the strategic and operational importance of the PSYOP contribution to the CINC's Strategic Concept, centralized planning of PSYOP should be focused at the combatant command level. When authorized, combatant commanders may allow multinational commanders to exercise operational control (OPCON) of PSYOP forces. The combatant commander may place PSYOP forces under OPCON of a subordinate joint force or component commander for appropriate mission support. PSYOP units may be integrated into multinational operations. Appropriate points of coordination and control of PSYOP activities should be established through a multinational PSYOP cell.

SOF Integration with Conventional Operations and Forces

To fully integrate with conventional operations, SOF must maintain effective liaison and coordination with all components of the joint force that may impact the conduct of SOF activities. Unity of effort among SOF and conventional forces is accomplished through a number of various integrating elements. These are as follows:

- **Special Operations Coordination Element (SOCOORD).** The SOCOORD acts as the principal advisor to an Army corps or Marine expeditionary force commander and their staffs on integrating SOF in the organizations plans and operations. The SOCOORD is a functional staff element of the Corps G-3 and not a part of the JFSOCC command structure. The SOCOORD coordinates for the special operations command and control element (SOCCE). Additionally, the SOCOORD integrates and synchronizes SOF into Corps OPLANS.
- **Special Operations Command and Control Element (SOCCE).** The SOCCE is a command and control element generally based on a U.S Army Special Forces company headquarters (SFOD-B) or a Ranger Liaison Element and found usually at a Corps or MAGTF level. The SOCCE integrates special operations (less PSYOP and CMO) with land or maritime operations and normally remains under the control of the Joint Force Special Operations Component Commander (JFSOCC). The SOCCE is the focal point for the synchronization and deconfliction of SOF missions with ground and maritime operations. The SOCCE collocates with the command post of the supported commander and performs C2 or liaison functions as directed by the JFSOCC. The SOCCE can also receive SOF operational, intelligence, and target acquisition reports directly from deployed SOF elements and provide them to the land force headquarters.
- **Special Operations Liaison Element (SOLE).** The SOLE is composed of SOF air operations planners and liaison officers from other SOF elements. The special operations task force will provide liaison personnel to the JTF and appropriate levels of each major JTF component command to assist in performing synchronization functions and integrating efforts during mission execution. This ensures special operations are deconflicted with conventional activities, that target selection and apportionment include both conventional and SOF requirements, and that ongoing special operations are integrated into the overall plan. (Example: It is the JFSOCC's liaison to the Joint Force Air Component Commander (JFACC) that ensures that SOF air and surface operations are integrated with all joint air operations. The SOLE accomplishes this through the air tasking order (ATO) system by

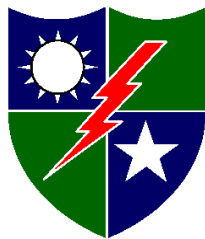
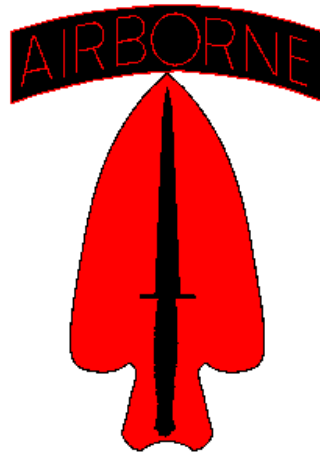
reconciling duplicative targeting, resolving airspace conflicts, and preventing fratricide. The SOLE reports directly to the JFSOCC, and coordinates with all JFSOCC components.

- **Naval Special Warfare Task Unit (NSWTU).** These provisional subordinate units of a Naval Special Warfare Group (NSWTG) provide command and control, coordinate administrative and logistical support, and integrate special operations with maritime operations. Designated Naval special warfare (NSW) forces may be under the operational control of the naval component commander or a JFSOCC. NSW forces often are assigned to conventional naval component commanders, as well as to theater JFSOCCs. Several NSWTUs could be operationally subordinate to a NSWTG, as well as having an NSWTU under the operational control of a JFSOCC.
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CHAPTER 3

US ARMY

SPECIAL OPERATIONS FORCES



CHAPTER 3

US ARMY SPECIAL OPERATIONS FORCES



US ARMY SPECIAL OPERATIONS COMMAND

On December 1, 1989, the Department of the Army established the US Army Special Operations Command (USASOC) at Fort Bragg, N.C., as a major Army command to enhance the readiness of Army Special Operations Forces and streamline the command and control of US Army Reserve Special Operations Forces. Army support to the US Special Operations Command (USSOCOM) located at MacDill Air Force Base, FL, also was enhanced as a result of the new command and control structure. As the Army's component of USSOCOM, USASOC provides Special Forces, Ranger, Special Operations Aviation, Psychological Operations and Civil Affairs forces to USSOCOM for deployment to combatant unified commands around the world (see Figure 3-1). As a major Army command, USASOC reports directly to Department of the Army for service guidance. USASOC commands both the active Army and US Army Reserve Special Operations Forces. It also provides oversight of Army National Guard Special Operations Force readiness, organization, training, and employment in coordination with the National Guard Bureau and State Adjutants General.

Ranger, Special Operations Aviation, Psychological Operations and Civil Affairs forces to USSOCOM for deployment to combatant unified commands around the world (see Figure 3-1). As a major Army command, USASOC reports directly to Department of the Army for service guidance. USASOC commands both the active Army and US Army Reserve Special Operations Forces. It also provides oversight of Army National Guard Special Operations Force readiness, organization, training, and employment in coordination with the National Guard Bureau and State Adjutants General.

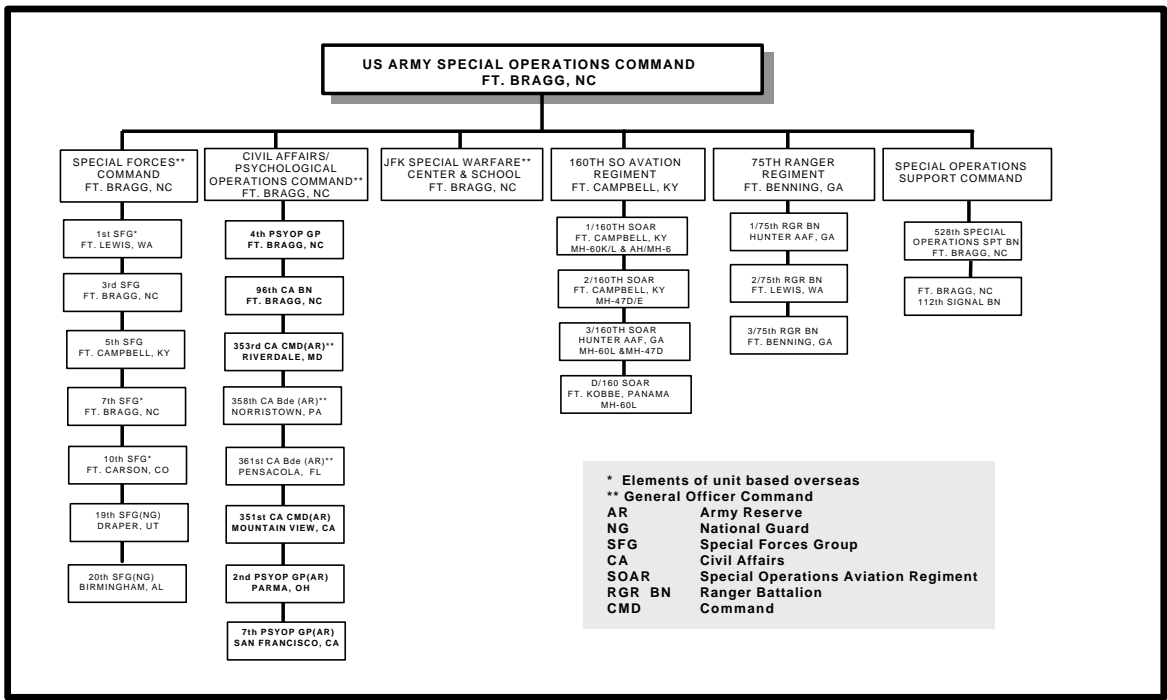


Figure 3-1. USASOC Organization Chart



THE 75th RANGER REGIMENT

When the 1st and 2nd Ranger Battalions were re-activated in 1974, General Abrams chartered the battalions to be "the best light infantry unit in the world" and a "standard bearer for the rest of the Army." After Operation Urgent Fury (Grenada, 1983), the requirement for more Rangers and a better suited command structure resulted in the formation of the 3rd Ranger Battalion and the Regimental Headquarters in 1984. Today, the 75th Ranger Regiment is part of the United States Special Operations Command (USSOCOM).

Mission

The 75th Ranger Regiment plans and conducts special military operations in support of US policy and objectives. Its specially organized, equipped, and trained soldiers provide the National Command Authority (NCA) the capability to rapidly deploy a credible military force to any region of the world. In addition, Rangers are often called upon to perform missions in support of general purpose forces (GPF).

The cornerstone of Ranger missions is that of direct action. More specifically, Rangers are the premiere airfield seizure and raid unit in the Army. In order to remain proficient in all light infantry skills, Ranger units also focus on mission essential tasks that include movement to contact, ambush, reconnaissance, airborne and air assaults, and hasty defense.

A typical Ranger Battalion or Regiment mission would involve seizing an airfield for use by follow-on general purpose forces and conducting raids on key targets of operational or strategic importance. Once secured, follow-on airland or airborne forces are introduced into theater and relieve the Ranger force so that it may conduct planning for future SOF operations.

Rangers rely heavily on external fire support. Ranger fire support personnel train extensively on the employment of CAS, attack helicopters, Naval Gunfire (NGF), AC-130 Gunship and artillery. The close working relationships with units that habitually support the force ensures that the Ranger Force always has the required assets to perform its mission.

Organization

The 75th Ranger Regiment, headquartered at Fort Benning, Georgia, is composed of three Ranger battalions, and is the premier light-infantry unit of the United States Army. The three Ranger battalions that comprise the 75th Ranger Regiment are geographically dispersed. Their locations are:

- 1st Battalion, 75th Ranger Regiment, Hunter Army Airfield, Georgia
- 2nd Battalion, 75th Ranger Regiment, Fort Lewis, Washington
- 3rd Battalion, 75th Ranger Regiment, Fort Benning, Georgia

Regimental Headquarters consists of a Command Group, normal staff positions (S-1 through S-5), a fairly robust communications detachment, a fire support element, a reconnaissance detachment of three 6-man teams, a cadre for the Ranger Training Detachment (RTD), and a Company Headquarters. Additionally, the Regiment has the capability of deploying a planning team consisting of experienced Ranger operations, intelligence, fire support, communications and logistics planners. The team can deploy on short notice with USASOC approval, to theater SOCs to plan ranger operations during crisis action planning for contingency operations.

The Battalions

Each of the three Ranger Battalions is identical in organization. Each battalion consists of three rifle companies and a Headquarters and Headquarters Company (see Figure 3-2). Each battalion is authorized 580 Rangers. However, the battalions may be up to 15% overmanned to make allowances for schools and TDYs.

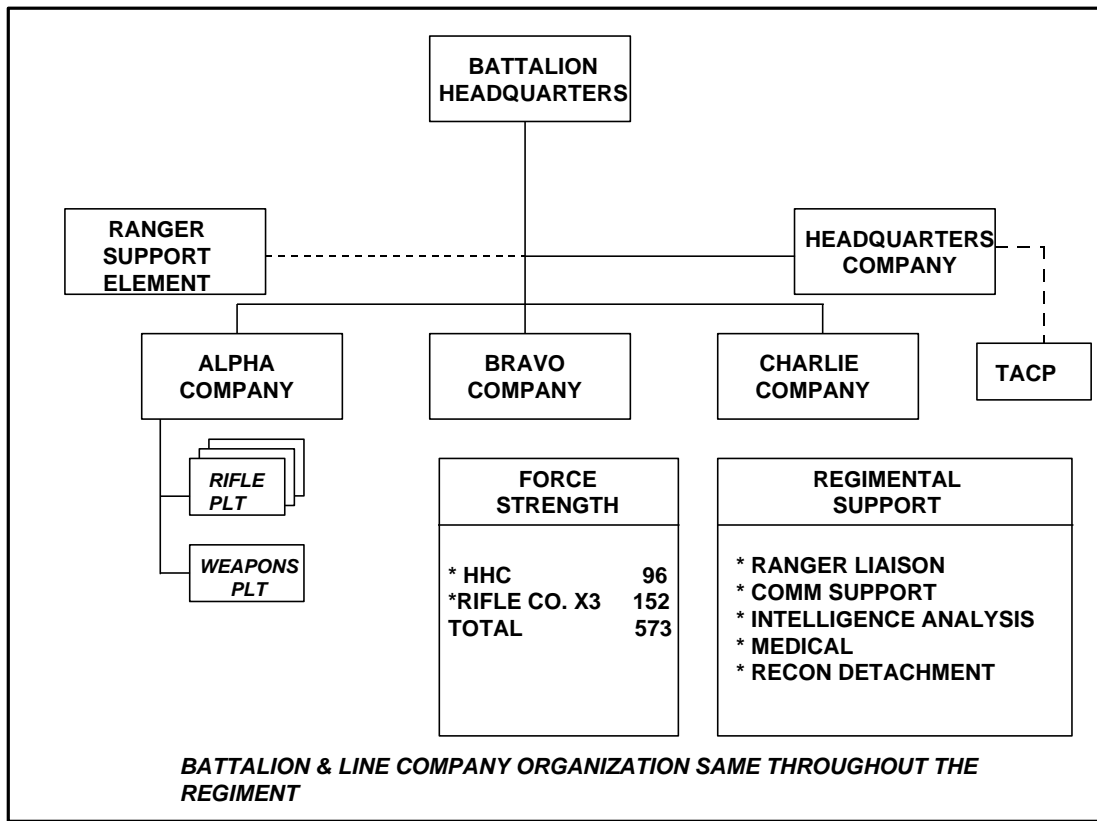


Figure 3-2. Ranger Battalion Organization

Command and Control

The flexibility of the Ranger Force requires it to perform under various command structures. The force can work unilaterally under a Corps, as a part of JSOTF, as an ARSOTF, or as an Army component in a JTF. Historically, it is common for the Ranger Force to conduct forced entry operations as part of a JSOTF, then become OPCON to a JTF to afford them the capability to conduct special operations/direct action missions.

Capabilities

The Army maintains the Regiment at a high level of readiness. Each battalion can deploy anywhere in the world with 18 hours notice. Because of the importance the Army places on the 75th Ranger Regiment, it must possess a number of capabilities. These capabilities include:

- Infiltrating and exfiltrating by land, sea, and air
- Conducting direct action operations
- Conducting raids
- Recovery of personnel and special equipment
- Conducting conventional or special light-infantry operations



Ranger Water Insertion

Limitations

Ranger units have a limited anti-armor capability (84mm Carl Gustav and Javelin) and lack organic indirect fire support (60mm mortars only). The only air defense artillery (ADA) system is the Stinger. Ranger units have no organic combat support (CS) or combat service support (CSS) and deploy with only 5 days of supplies. There are no organic transportation assets. As a result of the lack of organic CSS, Ranger units require logistical and mission support

from other services and/or agencies. Ranger battalions are light infantry and have only a few vehicles and crew-served weapons systems. Standard weapon systems per battalion are listed below:

- 84mm Ranger Antitank Weapons system (RAWS): 16
- 60mm mortars: 6
- M240G Machine Guns: 27
- M249 Squad Automatic Weapons (SAW): 54
- MK 19 Grenade Launcher: 12
- .50CAL Machine Gun: 12
- Javelin: 9

Deployment

On any given day, one Ranger Battalion is on Ready Reaction Force (RRF) 1 with the requirement to be "wheels up" within 18 hours of notification. Additionally, one rifle company with battalion command and control can deploy in 9 hours. The Regimental Headquarters remains on RRF1 at all times. RRF1 rotates between the three battalions normally in 13 week periods. While on RRF1, the designated battalion is prohibited from conducting any off post training, deployments for training (DFTs), etc., as they would be unable to meet the required deployment time standards. The Ranger Regiment can deploy in any number of ways. The force can deploy directly from home station to the area of operations. More often, the force deploys to an Intermediate Staging Base (ISB) in CONUS, or OCONUS to link-up with attachments, rest, plan, rehearse, etc. before conducting operations. METT-T (emphasis on time and distance to the area of operations) determines how the force will deploy.

Equipment

Each Ranger Battalion possesses 12 Ranger Special Operations Vehicles (RSOVs) for its airfield seizure mission. The vehicle is a modified Land Rover. Each vehicle carries a six or seven-man crew. Normally, each vehicle mounts an M240G MG and either a MK-19 Grenade Launcher or a M2, .50 cal MG. One of the passengers mans an anti-armor weapon (RAAWS, AT-4, LAW, and Javelin). The main purpose of the vehicle is to provide the operation force with a mobile, lethal defensive capability. They are *not* assault vehicles, but useful in establishing battle positions that



Ranger Motorcycle Operations

provide the force some standoff capability for a short duration. Each Battalion also possesses ten 250CC motorcycles that assist in providing security and mobility during airfield seizures. Most commonly used as listening posts/observation posts (LP/OPs), or as an economy of force screen for early warning, the motorcycles offer the commander tactical mobility.

Support

Each Ranger Battalion has a Ranger Support Element (RSE) that supports home station training. This unit (Riggers, Truck Drivers, Maintenance, etc.) is not organic, but through individual post memorandums of understanding provides the battalion with the necessary requirements to meet mission/training demands. It is important to note, however, that this unit, although responsible for supporting the Ranger Force's outload for combat, does not deploy with the unit. The logistical and support arrangements for extended sustainment remain a constant Ranger concern.

Company Organization

The rifle companies consist of 152 Rangers each, while the headquarters company has the remaining Rangers assigned. Each rifle company within the Regiment is organized the same. It is comprised of a Headquarters & Headquarters Company, 3 rifle platoons, and a weapons platoon. The weapons platoon of each Rifle Company contains a mortar section of two 60mm mortars (a third is available for special operations) and an anti-tank section of three 3-man teams firing the 84mm Carl Gustav (referred to as the RAAWS: Ranger Anti-Armor Weapon System). This weapon is also Ranger unique and not currently under any testing for other infantry units. A versatile weapon, it can fire High Explosive, High Explosive Anti-Tank, Illumination, smoke, and in the future, a flechette round. Finally, the weapons platoon has a sniper section consisting of two 2-man, M24 (7.62mm) sniper teams. The third team in this section employs the .50 cal Barrett Sniper System. The Barrett is a SOF specific weapon, but as of 1996 is undergoing testing and analysis for possible inclusion in other Army units.



U.S ARMY SPECIAL FORCES COMMAND (AIRBORNE)

On November 27, 1990, the US Army 1st Special Operations Command was redesignated the US Army Special Forces Command (Airborne). Its mission is to train, validate, and prepare Special Forces units to deploy and execute operational requirements for the warfighting commanders in chief.

Mission

Special Forces soldiers are carefully selected, specially trained, and capable of extended operations in extremely remote and hostile territory. They train to perform five doctrinal missions: Foreign Internal Defense (FID), Unconventional Warfare (UW), Special Reconnaissance (SR), Direct Action (DA), and Combating Terrorism (CBT). While Special Forces soldiers are capable of performing all of these missions, an increasing emphasis is being placed on FID and coalition warfare/support. FID operations are designed to help friendly developing nations by working with host country military and paramilitary forces to improve their technical skills, understanding of human rights issues, and to help with humanitarian and civic action projects.

A new collateral task that has emerged as a result of Operation Desert Shield and Desert Storm is Coalition Support. Coalition warfare/support draws upon the Special Forces soldier's maturity, military skills, language skills, and cultural awareness. It ensures the ability of a wide variety of foreign troops to work together effectively in a wide variety of military exercises or operations such as Operation Desert Storm.

Personnel

In addition to the individual skills of operations and intelligence, communications, medical aid, engineering, and weapons, each Special Forces soldier is taught to train, advise, and assist host nation military or paramilitary forces. Special Forces soldiers are highly skilled operators, trainers, and teachers. Area-oriented, these soldiers are specially trained in their area's native language and culture.

Organization

Special Forces Command exercises command and control over five active component groups. Additionally, it exercises training oversight of two Army National Guard groups. Each Special Forces Group is regionally oriented to support one of the warfighting commanders in chief (see Table 3-1).

Table 3-1. Special Forces Groups and Regional Orientations

UNIT	LOCATION	AREA OF RESPONSIBILITY
1 st Special Forces Group (Airborne) 2/1 and 3/1 1/1	Fort Lewis, Washington Okinawa Japan	PACOM
3 rd Special Forces Group (Airborne)	Fort Bragg, North Carolina	ACOM/CENTCOM/EUCOM
5 th Special Forces Group (Airborne)	Fort Campbell, Kentucky	CENTCOM
7 th Special Forces Group (Airborne) 1/7, 2/7, and 3/7(-) C-3/7	Fort Bragg, North Carolina Panama	SOUTHCOM
10 th Special Forces Group (Airborne) 2/10 and 3/10 1/10	Fort Carson, Colorado Stuttgart, GE	EUCOM
19 th Special Forces Group (Airborne)	Draper, Utah	PACOM/CENTCOM
20 th Special Forces Group (Airborne)	Birmingham, Alabama	SOUTHCOM

SPECIAL FORCES GROUP (AIRBORNE)

Organization

The Special Forces Group (Airborne) is comprised of one Headquarters and Headquarters Company (HHC), one Support Company (SPT CO), and three Special Forces Battalions (SF BN). See Figure 3-3 for typical group organization.

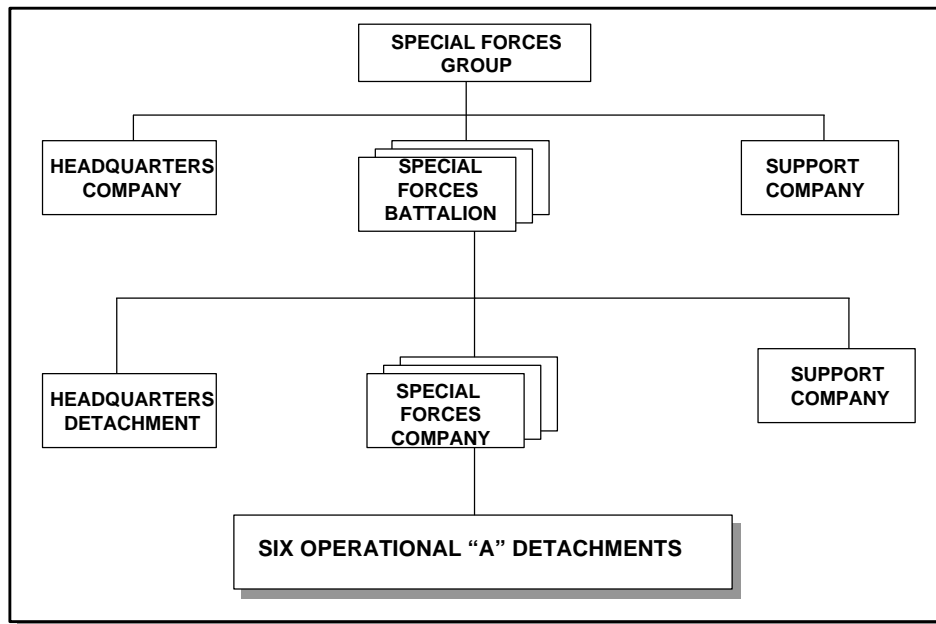


Figure 3-3. SF Group Organization

Personnel

The HHC consists of 28 officers, 3 warrant officers, and 58 enlisted soldiers. The SPT CO consists of 13 officers, 12 warrant officers, and 151 enlisted soldiers. Each SF BN consists of 39 officers, 24 warrant officers, and 320 enlisted soldiers.

Mission

To plan and support special operations in any operational environment in peace, conflict, and war as directed by the National Command Authorities.

Capabilities

C2 and Support Elements:

- Function as the Army component of a JSOTF or ARSOTF when augmented by resources from other services.
- Establish, operate, and support an SFOB and three FOBs.
- Provide up to three C2 elements (SFODs B) to supported conventional headquarters.
- Train and prepare operational elements for deployment.

Operational Elements:

- Infiltrate and exfiltrate specified operational areas by air, land, and sea.

Air Infiltration (Parachute)

Special Forces Groups Airborne, Special Forces Battalions, Operational Detachment Charlie (ODC) Special Forces Companies, Operational Detachment Bravo (ODB), and Operational Detachment Alpha's (ODA) are static line parachute qualified. *During training, cloud ceilings of less than 800ft above ground level (AGL) or winds in excess of 13 knots prevent static infiltrations without a waiver. Static line operations can not be conducted at altitudes greater than 10,000 feet AGL. (HALO/HAHO) Three ODAs per SFG can infiltrate by Military freefall High Altitude Low Opening (HALO) or High Altitude High Opening (HAHO). HALO/HAHO operations cannot be conducted in ceilings lower than 500 feet AGL. HALO/HAHO operations cannot be conducted at altitudes greater than 36,000 feet AGL in combat operations without a waiver. Training safety requirements dictate ground visibility and winds less than 18 knots for HALO/HAHO operations.*

Air Infiltration (Fixed and Rotary Wing Aircraft) Non Parachute

ODC, ODB, and ODA personnel and equipment can infiltrate via fixed and rotary wing aircraft. Specific infiltration techniques include air, land, rappel, and fast rope. Capabilities are only limited by aircraft requirements and landing site availability.

Water Infiltration/Exfiltration

All water infiltration techniques may be initiated from surface or sub-surface mother craft, dropped by parachute from fixed wing aircraft, or delivered by rotary wing aircraft. Three ODAs per SFG can infiltrate or exfiltrate using closed circuit breathing equipment. Three ODAs per SFG are capable of utilizing open circuit breathing equipment for non-tactical applications (i.e.,

ship bottom searches and recovery operations). Nine ODAs per SFG are trained to infiltrate/exfiltrate by combat rubber raiding craft (CRRC). Twelve ODAs per SFG can infiltrate/exfiltrate by surface swim techniques. *All surface swim operations are limited to sea states not to exceed 3 foot chop and 4 foot swell. Surface swim operations will not be conducted against currents in excess of 1 knot.*

Land Infiltration/Exfiltration

54 ODAs and 9 Support Operations Team Alpha (SOTA) per SFG can infiltrate/exfiltrate an operational area by foot. Foot movement limiting factors include terrain, water availability, enemy presence and soldier load. *Tactical foot movement distance is limited to 0.5-6 kilometers per hour based on terrain, vegetation and weather.* 9 ODAs assigned to the 10th and 1st SFG, 7 ODAs assigned to the 3rd and 7th SFG and 6 ODAs from the 5th SFG can infiltrate using High Altitude/Technical Mountain techniques. 36 ODAs from the 10th SFG and 36 ODAs from the 1st SFG can infiltrate using ski techniques and Mobile Over Snow Transports (MOST). 54 ODAs assigned to the 5th SFG and 18 ODAs assigned to the 3rd SFG are trained and equipped to infiltrate/exfiltrate by Ground Mobility Vehicles (GMVs). *Land mobility by GMV is limited to approximately a 150 mile radius with full combat load without resupply.*

- Conduct operations in remote and denied areas for extended periods of time with little external direction and support.
- Develop, organize, equip, train, and advise or direct indigenous military and paramilitary forces.
- Plan and conduct unilateral SF operations.
- Train, advise, and assist US and allied forces or agencies.
- Perform other special operations as directed by the NCA or a unified commander.

The group headquarters commands and controls assigned and attached forces:

- Plans, coordinates, and directs SF operations separately or as part of a larger force.
- Trains and prepares SF teams for deployment.
- Provides command and staff personnel to establish and operate an SFOB.
- Provides advice, coordination, and staff assistance on the employment of SF elements to joint SOC, JSOTF, security assistance organization (SAO), or other major headquarters.
- Provides cryptomaterial support to the SFOB and its deployed SF teams.

SUPPORT COMPANY, SPECIAL FORCES GROUP (AIRBORNE)

Organization

The Support Company, Special Forces Group (Airborne) (SPT CO) is comprised of a Company HQ, Service Detachment, Military Intelligence Detachment, Medical Section, Signal Detachment, and Personnel Section.

Personnel

The SPT CO consists of 13 officers, 12 warrant officers, and 151 enlisted soldiers.



SF Medical Assistance in Bosnia

Mission

To provide intelligence support, combat service support, and signal support to an SFOB and its deployed operational elements.

Capabilities

- Provides integrated all-source intelligence collection management, analysis, production, and dissemination in support of the Special Forces Group (SFG) and its attached elements.
- Provides counterintelligence and interrogation support for the SFG and its attached elements.
- Provides intelligence advice, assistance, and training to operational elements of the SFG.
- Provides secure special intelligence (SI).
- Performs special security office (SSO) functions for the SFOB.
- Provides limited transportation support to the SFOB.
- Provides unit-level supply, to include class V, to the SFOB and its deployed operational elements.
- Provides food service support to the SFOB.
- Procures nonstandard supplies and equipment for the SFG and its attached elements.
- Provides health service support to the SFOB, to include unit-level medical support, medical supply, temporary medical resuscitative treatment for all classes of patients, emergency dental treatment, and preventive medicine support.

- Performs unit-level maintenance on organic equipment and the equipment of the group headquarters and headquarters company; performs direct support and limited general support maintenance for those items of signal equipment peculiar to the SFG; performs unit-level maintenance on organic communications-electronic (C-E) equipment assigned to the SFOB.
- Provides personnel and cargo parachute packing, unit maintenance of air delivery items, rigger support, and limited aerial delivery support to the SFOB.
- Installs, operates, and maintains continuous internal communications for the SFOB, to include message center and crypto services, telephone, teletypewriter.
- Terminates radio and landline telephone and teletype circuits from higher headquarters and the area communications system at the SFOB.
- Provides secure communications between the SFOB and the three deployed FOBs.
- Provides limited still photographic support for the SFG and its attached elements.

SPECIAL FORCES BATTALION (AIRBORNE)

Organization

The Special Forces Battalion (Airborne) is comprised of one Battalion Headquarters Detachment (BN HQ DET/C DET), one Support Company (SPT CO), and three Special Forces Companies (SF CO). There is one SFOD Combat Diving A Detachment (CBT DIV A DET) and one SFOD Military Free Fall A Detachment (MFF A DET) per battalion.



SF Conducting Special Reconnaissance

Personnel

The BN HQ DET consists of 11 officers, 2 warrant officers, and 25 enlisted soldiers. The SPT CO consists of 4 officers, 1 warrant officer, and 94 enlisted soldiers. Each SF CO consists of 8 officers, 7 warrant officers, and 67 enlisted soldiers.

Mission

To plan, conduct, and support special operations in any operational environment in peace, conflict, and war.

Capabilities

The battalion's C2 and support elements can function as the headquarters for an ARSOTF or for a JSOTF when augmented by resources from other services. The C2 and support elements can:

- Establish, operate, and support an FOB.
- Provide one SOCCE to a corps or higher headquarters.
- Train and prepare SF teams for deployment.
- Direct, support, and sustain deployed SF teams.

BATTALION HEADQUARTERS DETACHMENT (C DETACHMENT)

Organization

The BN HQ DET is comprised of the Battalion Headquarters, one Signal Section (SIG SEC), the S-1 Section (S-1), the S-2 Section (S-2), the S-3 Section (S-3), the S-4 Section (S-4), the S-5 Section (S-5), and the Medical Section (MED SEC).

Personnel

The BN HQ DET consists of 11 officers, 2 warrant officers, and 25 enlisted soldiers.

Mission

To provide command and control, staff planning, and staff supervision of administration and operations for the Special Forces battalion and its attached elements.

Capabilities

The SFOD C, also known as C detachment, provides C2, staff planning, and staff supervision of battalion operations and administration. The SFOD C detachment:

- Plans, coordinate, and direct SF operations separately or as part of a larger force.
- Provides command and staff personnel to establish and operate an FOB.
- Provides advice, coordination, and staff assistance on the employment of SF elements to a joint SOC, JSOTF, SAO, or other major headquarters.

SUPPORT COMPANY, SPECIAL FORCES BATTALION (AIRBORNE)

Organization

The Support Company of the Special Forces Battalion is comprised of one Military Intelligence Detachment (MI DET), a Company Headquarters (CO HQ), a Service Detachment (SVC DET), and a Signal Detachment (SIG DET).

Personnel

The Support Company consists of 4 officers, 1 warrant officer, and 94 enlisted soldiers.

Mission

To provide intelligence and electronic warfare (EW) support, CSS, and signal support to an FOB and its deployed operational elements.

Capabilities

- Provides integrated all-source intelligence collection management, analysis, production, and dissemination in support of the battalion and its attached elements.
- Provide counterintelligence support for the SF battalion and its attached elements.
- Provide intelligence technical advice, assistance, and training to operational elements of the SF battalion.
- Provide secure special intelligence (SI) between the SFOB and FOB.
- Perform special security office (SSO) functions for the FOB.
- Provide EW support to the operational detachments of the battalion.
- Provide administrative and logistical support to the SF battalion.
- Provide food service support to the battalion.
- Provide unit-level supply, to include class V, for the FOB.
- Provide personnel and cargo parachute packing, unit level maintenance of air delivery items rigger support, and limited air delivery support to the FOB.
- Install, operate, and maintain continuous internal communications for an FOB, to include message center and crypto services, telephone, typewriter, and radio communications.
- Terminate secure communication with the SFOB and FOB.
- Perform unit-level maintenance on organic wheeled vehicles, power generation equipment, and communication-electronics (CE) equipment (less crypto) assigned to the battalion. Performs limited general support maintenance for those items of signal equipment peculiar to the SF battalion.
- Terminate radio and landline telephone and teletype circuits from higher headquarters and the area communications system at the FOB.

SPECIAL FORCES COMPANY, SPECIAL FORCES BATTALION

Organization

The Special Forces Company is comprised of a Company Headquarters (CO HQ) and six SFOD Operational "A" Detachments (A DET).

Personnel

The Special Forces Company consists of 8 officers, 7 warrant officers, and 67 enlisted soldiers.

Mission

To plan and conduct special operations in any operational environment in peace, conflict, and war.

Capabilities

- Plan and conduct Special Forces operations separately or as part of a larger force.
- Train and prepare Special Forces teams for deployment.
- Infiltrate and exfiltrate specified operational areas by air, land, or sea.
- Conduct operations in remote areas and hostile environments for extended periods with minimal external direction and support.
- Develop, organize, equip, train, and advise or direct indigenous forces of up to regimental size in special operations.
- Train, advise, and assist other US and allied forces and agencies.
- When augmented, establish and operate an advanced operational base (AOB) to expand C2 capabilities of an SFOB or FOB.
- Serve as SOCCE at a corps or higher headquarters.
- Serve as a C2 element (area Command) in a specified operational area.
- Serve as a pilot team to assess the resistance potential in a specified operational area.
- Establish and operate an isolation facility (ISOFAC) for an SFOB or FOB.
- Perform other special operations as directed by higher authority.

SPECIAL FORCES OPERATIONAL DETACHMENT "A"

Personnel

The A Detachment consists of one Captain (Commander), one Warrant Officer (Detachment Technician), one Master Sergeant (Operations Sergeant), one Sergeant First Class (Assistant Operations Sergeant), two Weapons Sergeants, two Engineer Sergeants, two Medical Sergeants, and two Communications Sergeants (see Figure 3-4).

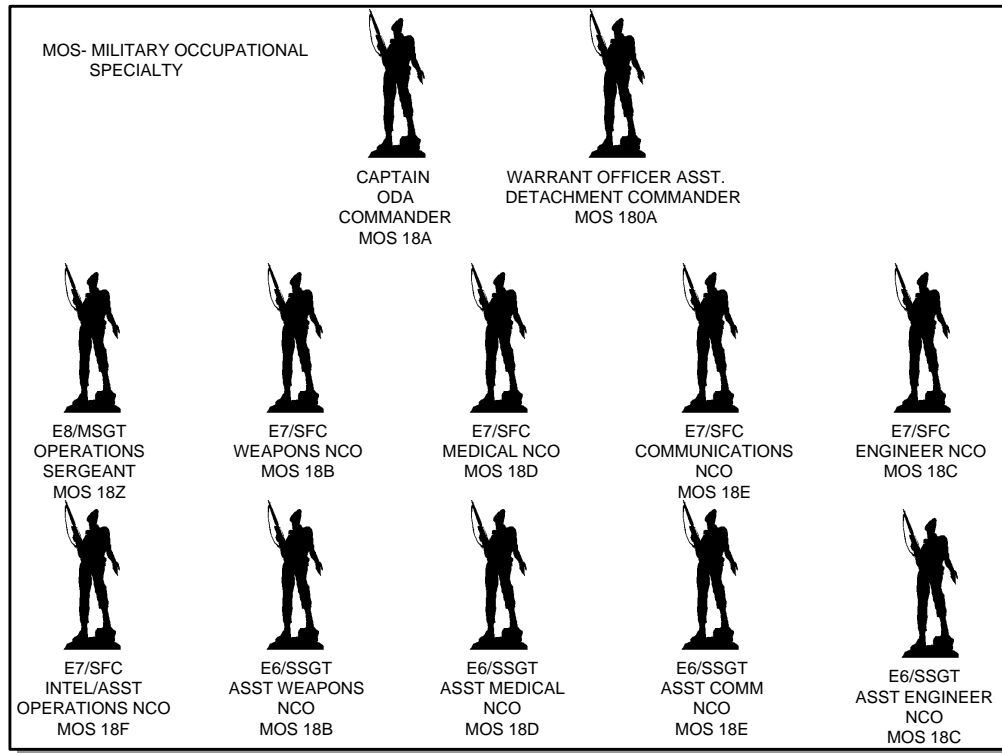


Figure 3-4. SFOD "A" Detachment Organization

Capabilities

- Plan and conduct SF operations separately or as part of a larger force.
- Infiltrate and exfiltrate specified operational areas by air, land, or sea.
- Conduct operations in remote areas and hostile environments for extended periods of time with a minimum of external direction and support.
- Develop, organize, equip, train, and advise or direct indigenous forces up to battalion size in special operations.
- Train, advise, and assist other US and allied forces and agencies.
- Plan and conduct unilateral SF operations.
- Perform other special operations as directed by higher authority.



SF ODA HUMVEE and Motorcycle OPS



160TH SPECIAL OPERATIONS AVIATION REGIMENT (AIRBORNE)

The 160th Special Operations Aviation Regiment (Airborne) provides aviation support to Army special operations forces. The Regiment consists of modified OH-6 light observation helicopters, MH-60 utility helicopters, and MH-47 medium-lift helicopters. The capabilities of the 160th SOAR have been evolving since the early 1980s. Shortly after the failed hostage rescue mission, Desert One, in Iran, the Army formed a special aviation unit. The unit drew on some of the best aviators in the Army and immediately began an intensive training program in low-level, night operations. The unit became a battalion of its own on October 16, 1981. Designated the 160th Aviation Battalion, the unit was popularly known as Task Force 160 because of the constant attachment and detachment of units to prepare for a wide variety of missions. Its focus on night operations resulted in the nickname, "The Night Stalkers." On May 16, 1990 the unit was reorganized, designated the 160th Special Operations Aviation Regiment (Airborne), and assigned to the US Army Special Operations Command.

Organization

The 160th SOAR(A) is based at Fort Campbell, KY and is composed of four active duty battalions and one forward deployed company. Its battalions include the Fort Campbell based 1/160 which flies the AH-6, MH-6, MH-60K and MH-60L DAP; the Fort Campbell based 2/160 which flies the MH-47E; the Ft. Campbell based 4/160 Special Operations Aviation Support battalion; and the Hunter Army Airfield, Savannah, GA, based 3/160 which flies the MH-60L and MH-47D. D/160 consists of five MH-60Ls based at Ft. Kobbe, Panama. Although all Army aviation units have an inherent capability to support special operations, the units of the 160th SOAR(A) have been specifically designated by the Secretary of Defense to be prepared, trained, and task organized for special operations mission support. The 160th SOAR(A) organizes, trains, equips, validates, employs, sustains, and maintains air assets for worldwide deployment and assignment to theater CINCs for conducting direct action, special reconnaissance, and other special operations.



MH-47 Exfiltration Of Rangers From An Airfield.

Army special operations aviation assets conduct specialized aviation operations in conjunction with other special operations forces. These operations include the use of dedicated aviation assets to:

- Insert, extract, and resupply SOF.
- Conduct armed escort, reconnaissance, surveillance, and electronic warfare in support of SOF missions.
- Provide C3 for SOF elements.
- Provide general support aviation during peacetime and contingency operations.

The most frequent mission is clandestine penetration for the insertion, extraction, and resupply of SOF by air.

MH-6J LIGHT ASSAULT HELICOPTER**MH-6J****Mission**

The MH-6J is a single engine light utility helicopter that has been modified to externally transport up to six combat troops and their equipment and is capable of conducting overt and covert infiltrations, exfiltrations, and combat assaults over a wide variety of terrain and environmental conditions (see Table 3-2). It is also used for command and control and reconnaissance missions. Its small size allows for rapid deployability in C-130, C-141, C-17 and C-5 transport aircraft. Aircraft modifications and aircrew training allow for extremely rapid upload and download times.

Mission Equipment

- Communications: The MH-6J avionics package consists of FM, UHF, VHF, Motorola Saber, and SATCOM. All are secure capable.
- The basic MH-6 configuration consists of the External Personnel System mounted on each side of the aircraft, for a total of six external and two internal seating positions.
- The aircraft can be rapidly configured for Fastrope and STABO operations. Motorcycle racks provide the capability to insert and extract up to 2 motorcycles.
- Forward Looking Infrared Radar (FLIR): Some aircraft are equipped with FLIR, which is a passive system that provides an infrared image of terrain features and ground or airborne objects of interest. Images may be recorded for playback on a standard VHS video cassette recorder.
- Defensive systems. Each aircraft is equipped with the APR 39 Radar Warning Receiver System, which detects and identifies hostile search/acquisition and fire control radars and provides audio and video alerts to the flight crew.

MH-6J MISSION PLANNING

Table 3-2. MH-6J Planning Data

Aircrew Composition	Normal mission configuration consists of a pilot and copilot.
Aircrew Qualifications	All crews are qualified to conduct NVG infil and exfil, STABO, FAST ROPE, and aerial suppression operations to urban, mountainous, desert, and jungle objectives, as well as to ships and off-shore drilling platforms. Crews are trained in long range precision navigation and formation flight over land and water to arrive at objectives at a prearranged time (\pm 30 seconds).
Environmental Restrictions	<ul style="list-style-type: none"> • Visual Meteorological Conditions (VMC) only (equipped for emergency Instrument Meteorological Conditions only). • No moderate or severe turbulence for aircraft greater than 12,500 lbs. • No icing. • 40 knot winds maximum allowable for starting the aircraft.
Weather minimums	500 ft ceiling and 2 miles visibility for training and planning; METT-T dependent for operational missions.
Landing Area (for planning)	50' x 50', however, the MH-6 is capable of landing on any structure or confined area that will allow clearance for the rotor systems.
Normal planning airspeed (cruise, with passengers)	80 knots
Cruise airspeed (no passengers)	100 knots
Normal mission range: No Aux (with aux fuel tanks)	5 pax: 133 NM
1 Aux	3 pax: 262 NM
2 Aux	2 pax: 313 NM
Maximum range (2 auxiliary tanks installed)	400 NM
Mission endurance (with 1 auxiliary tank installed)	3 hrs, 20 min (including 20 minute reserve)
Maximum endurance (with 2 auxiliary tanks installed)	5 hrs (including 20 minute reserve)

Deployability

- The MH-6 can be deployed by any Air Force transport aircraft. A C-141 is capable of transporting up to 6 MH-6s and a C-130 is able to transport up to 3 MH-6s, with a rapid upload/offload capability. MH-6s can offload, build up, and depart within 15 minutes.
- Self-deployment is unlimited with refuel support at ground or surface vessel locations every 270 NM.

AH-6J LIGHT ATTACK HELICOPTER



AH-6J Firing the Hellfire Missile

Mission

The AH-6J is a highly modified version of the McDonnell Douglas 530 series commercial helicopter. The aircraft is a single turbine engine, dual flight control, light attack helicopter. It is primarily employed in close air support of ground troops, target destruction raids, and armed escort of other aircraft. The AH-6J normally is flown by two pilots. *Overwater operations require two pilots.* (For mission planning data see Tables 3-3 and 3-4.)

Mission Equipment

- Communications equipment capable of secure operations including UHF, VHF, and the Motorola “SABER” VHF. SATCOM is installed on some aircraft and available as an option on all aircraft.
- Forward Looking Infrared (FLIR). A controllable, infrared surveillance system which provides a TV video-type infrared image of terrain features and ground or airborne objects of interest. The FLIR is a passive system and detects long wavelength radiant IR energy emitted, naturally or artificially, by any object in daylight or darkness. Some aircraft may be equipped with the AESOP FLIR, which is a laser range finder/designator that allows the AH-6J to detect, acquire, identify, and engage targets at extended ranges with laser guided munitions.

Weapons Systems

The AH-6J is capable of mounting a variety of weapons systems. Normal aircraft configuration consists of two 7.62mm miniguns with 1500 to 2000 rounds per gun, and two seven-shot 2.75” rocket pods. The following are additional configurations:

- The M134 7.62mm Minigun is a 6 barrel, air-cooled, link-fed, electrically driven Gatling gun, with a 1,000 meter maximum effective range and a tracer burnout at 900 meters. The weapon has a rate of fire of 2,000 or 4,000 rounds per minute. The ammo can, 2 per aircraft, holds a

maximum of 2625 rds of ball, tracer, low light tracer, or Sabot Launched Armor Piercing (SLAP) ammo.

- M261 7 tube Rocket Launcher. This system fires a 2.75” Folding Fin Aerial Rocket (FFAR) with a variety of special purpose warheads, including: 10 lb. and 17 lb. high explosive (HE) warheads for light armor and bunker penetration (bursting radius of 8-10 meters for a 10 lb. warhead, 12-15 meters for the 17 lb. warhead), with either proximity or contact fuse; the anti-personnel flechette warhead, filled with 2,200 flechettes; white phosphorous; white and IR illumination warheads, providing up to 120 seconds of overt light or 180 seconds of IR light; the Multi-Purpose Sub-Munitions (MPSM) warhead, containing 9 submunitions which are effective against light armor and personnel; and a warhead containing the CS riot control agent. The 2.75” FFAR can be used as a point target weapon at ranges from 100 to 750 meters and an area fire weapon at ranges up to 7000 meters.
- M260 Rocket Launcher. 19 shot 2.75 FFAR rocket pod; all other data is the same as above.
- AGM-114 Hellfire. The Hellfire is a 100 lb. semi-active laser guided missile, capable of defeating any known armor. Missile launchers attach to the aircraft in pairs and are mounted on the outboard stores. Each launcher can hold two missiles, for a total of four missiles. The minimum engagement range is .5 KM to a maximum of 8 KM. The missile can be designated by any ground or air NATO standard laser designator, including the AESOP FLIR (if available).
- .50 Cal Machine Gun or 40mm MK 19 Automatic Grenade Launcher may be substituted for 7.62mm minigun in some configurations.

Normal engagement ranges are:

- Minigun – 100 to 750 meters.
- 2.75” FFAR – 100 to 600 meters (in direct fire mode).
- Hellfire Missiles – 800 to 8000 meters.

NOTE

Due to weight restrictions, armament/ammunition loads and fuel may have to be adjusted to achieve the necessary range/endurance and weapons loads called for by the mission.

Deployability

- The AH-6 can be deployed by any Air Force transport aircraft. A C-141 is capable of transporting up to 6 AH-6s and a C-130 is able to transport up to 3 AH-6s, with a rapid upload/offload capability. AH-6s can offload, build up, and depart within 15 minutes.
- Self deployment is unlimited with refuel support at ground or surface vessel locations every 270 NM.

AH-6J Mission Planning

Table 3-3. AH-6J Planning Factors

Aircrew Composition	Normal mission configuration consists of two pilots. All weapons systems can be employed from either seat.
Aircrew Qualifications	All crews are qualified to support flight operations for the missions stated in Joint Pub 3-05 for Joint Special Operations. Crew qualifications include multi-ship live-fire operations in urban, overwater, mountain, desert, jungle, and NBC environments, and against buildings, ships, and oil rigs. Crews are trained in night vision goggle (NVG) long range overland and overwater navigation, with an arrival standard of ± 30 seconds.
Environmental Restrictions	<ul style="list-style-type: none"> • Visual Meteorological Conditions (VMC) only (equipped for emergency Instrument Meteorological Conditions only). • No moderate or severe turbulence for aircraft greater than 12,500 lbs. • No icing. • 40 knot winds maximum allowable for starting the aircraft.
Weather minimums	500 ft ceiling and 2 miles visibility for training and planning; METT-T dependent for operational missions.
Landing Area (for planning)	50' x 50'.

Table 3-4. AH-6J Performance Characteristics

Normal planning airspeed (cruise)	90 knots
Maximum dash airspeed	100-120 knots
Maximum range in mission configuration	265 NM
Maximum range (auxiliary tanks installed)	351 NM
Mission endurance	3 hrs, 20 min (including 20 minute reserve)
Maximum endurance (with auxiliary tanks)	5 hrs (including 20 minute reserve)

MH-60 BLACKHAWK

Mission

The primary mission of the MH-60 is to conduct overt or covert infiltration, exfiltration, and resupply of SOF across a wide range of environmental conditions. An armed version, the Direct Action Penetrator (DAP), has the primary mission of armed escort and fire support. Secondary missions of the MH-60 include external load, CSAR and MEDEVAC operations. The MH-60 is capable of operating from fixed base facilities, remote sites, or ocean going vessels. See Tables 3-5 and 3-6 for mission planning data.



MH-60K Deck Landing

The 160th SOAR(A) operates 3 models of the Blackhawk:

- The MH-60K (Blackhawk) is a highly modified twin-engine utility helicopter based on the basic UH-60 airframe but developed specifically for the special operations mission. Improvements include aerial refueling (AR) capability, an advanced suite of aircraft survivability equipment (ASE), and improved navigation systems, including multi-mode radar to further improve pinpoint navigation in all environments and under the harshest conditions.
- The MH-60L flown by the 160th SOAR(A) is a highly modified version of the standard US Army Blackhawk, configured for special operations use.
- The MH-60L Direct Action Penetrator (DAP) is an MH-60L modified to mount a variety of offensive weapons systems. Its mission is to conduct attack helicopter operations utilizing area fire or precision guided munitions and armed infiltration or exfiltration of small units. It is capable of conducting direct action missions (DA) as an attack helicopter or has the capability to reconfigure for troop assault operations. In the Direct Action role, the DAP would not normally be used as a primary transport for troops or supplies because of high

gross weights. The DAP is capable of conducting all missions during day, night, or adverse weather conditions.

- The DAP can provide armed escort for employment against threats to a helicopter formation. Using team tactics, the DAP is capable of providing suppression or close air support (CAS) for formations and teams on the ground.

MH-60 Standard Mission Equipment

The following are systems and equipment always on board the aircraft during tactical missions.

- Communications: the MH-60 avionics package consists of FM, UHF (HAVE QUICK II capable), VHF, HF, Motorola Saber, and SATCOM. MH-60K includes SINCGARS. All are secure capable.
- Forward Looking Infrared (FLIR). A controllable, infrared surveillance system which provides a TV video-type infrared image of terrain features and ground or airborne objects of interest. The FLIR is a passive system and detects long wavelength radiant IR energy emitted, naturally or artificially, by any object in daylight or darkness.
- Door guns (7.62mm Minigun). 6 barrel, air-cooled, electrically operated Gatling gun; MEF 1000 meters; Fires A165, 7.62mm Ball; A257, 7.62mm Low Light Ball; and SL66, armor piercing sabot. One gun each is mounted outside both the left and right gunner's windows. Normally operated by the crew chiefs. Sighting by open steel sites, Aimpoint, or AIM-1 LASER.
- Ballistic Armor Subsystem. Fabric covered steel plating provides increased ballistic protection in the cockpit and cabin.
- Guardian Auxiliary Fuel Tanks. Two 172 gallon tanks provide range extension of approximately two hours (mains plus two auxiliary tanks: 4 hours total), mounted in the cabin area at the aft bulkhead, occupies approximately 18 sq ft of usable cabin floor space. Normal operational time without the Guardian tanks is approximately two hours ten minutes.
- Fast Rope Insertion/Extraction System (FRIES) bar. Capable of supporting 1,500 pounds per side.

MH-60 Mission Flexible Systems

The following are systems that can be mounted on the MH-60L to support a primary mission or enhance the capabilities of aircraft performing assault or DAP missions:

- AN/AAQ-16D AESOP FLIR. The AESOP is a FLIR with a laser range finder/designator (LRF/D). The Q-16D allows the DAP to detect, acquire, identify, and engage targets at extended ranges with laser guided munitions.
- Cargo Hook. Mounted in the belly of the aircraft below the main rotor, the hook is capable of supporting external loads up to 9000 pounds.

- External Rescue Hoist System. Eastern-Breeze hydraulic hoist capable of lifting 600 pounds with 200 feet of usable cable. Primary control is by the crew chief/hoist operator using a hand held pendant.
- Internal Auxiliary Fuel System (IAFS). The MH-60 has wiring provisions for four additional 150 gallon fuel cells which may be mounted in the cargo area. Each fuel cell would provide approximately 50 minutes flight endurance. The maximum number of additional fuel cells may be limited due to ambient conditions and weight limitations. Use of all four IAFS tanks with the Guardian tanks reduces usable cargo area space to near zero.
- External Extended Range Fuel System (ERFS) (MH-60L only). Consists of either two 230 gallon, two 230 and two 450 gallon, or four 230 gallon jettisonable fuel tanks that can be mounted on the External Stores Support System for long range deployment of the aircraft. Use of the ERFS restricts usage of the M-134 miniguns and specific configuration may be limited by center-of-gravity or maximum gross weight limitations, and/or ambient conditions.



MH-60K

- External Tank System (ETS MH-60K only): two 230 gallon jettisonable fuel tanks can be mounted on the External Tank System for long range deployment of the aircraft. Use of the ETS restricts usage of the M-134 miniguns and specific configuration may be limited by center-of-gravity or maximum gross weight limitations, and/or ambient conditions. The ETS is capable of fuel replenishment by air refueling.
- Air Refueling (A/R); the MH-60K is equipped with an A/R probe that allows extended range and endurance by refueling from MC/KC-130 tanker aircraft.
- Personnel Locator System (PLS), AN/ARS-6(V). Locates personnel equipped with the AN/PRC-112(V) or equivalent survival radio.
- Command and Control Console. Provides four operator positions with access to the four AN/ARC-182(V) Multi-band transceivers and FLIR display.

MH-60 DAP Weapons Systems and Employment

Integrated fire control systems and a pilot's head-up display (HUD) combine to make the DAP a highly accurate and effective weapons delivery platform both day and night. The DAP is capable of mounting two M-134 7.62mm miniguns, two 30mm chain-guns, two 19-shot 2.75 rocket pods, and Hellfire and Stinger missiles in a variety of combinations. The standard configuration of the DAP is one rocket pod, one 30mm cannon, and two miniguns. The configuration is changed based on METT-T. The MH-60L DAP has the capability to perform both the utility and armed mission. Time to reconfigure the aircraft is minimal from either the armed to the utility or vice versa. The 7.62 miniguns remain with the aircraft regardless of the mission.

- The M134 7.62mm Minigun is a 6 barrel, air-cooled, link fed, electrically driven Gatling gun, with a 1,000 meter maximum effective range and a tracer burnout at 900 meters. The weapon has a rate of fire of 2,000 or 4,000 rounds per minute, and is mounted in the fixed position on the left and right sides of the aircraft. The DAP normally carries 6,000 rounds of 7.62mm.
- M261 19 tube Rocket Launcher. This system fires a 2.75" FFAR with a variety of special purpose warheads, including: 10 lb. and 17 lb. high explosive (HE) warheads for light armor and bunker penetration (bursting radius of 8-10 meters for a 10 lb. warhead, 12-15 meters for the 17 lb. warhead), with either proximity or contact fuse; the anti-personnel flechette warhead, filled with 2,200 flechettes; white phosphorous; white and IR illumination warheads, providing up to 120 seconds of overt light or 180 seconds of IR light; the Multi-Purpose Sub-Munitions (MPSM) warhead, containing 9 submunitions which are effective against light armor and personnel; and a warhead containing the CS riot control agent. The 2.75" FFAR can be used as a point target weapon at ranges from 100 to 750 meters and an area fire weapon at ranges up to 7000 meters. The aircraft can carry an additional load of rockets internally allowing the crew to reload the rocket pod without having to return to a rear arm site. The reload can be accomplished in under 15 minutes.
- M230 30mm Chain Gun. Rapid fire cannon capable of firing 625 rounds of High Explosive Dual Purpose (HEDP) per minute at ranges out to 4,000 meters. The 30mm cannon is considered a point target weapon at a range of 1,500 meters and less, or as an area fire weapon at ranges up to 4,000 meters. Each cannon has its own magazine capable of carrying 1,100 rounds.
- AGM-114 Hellfire. The Hellfire is a 100 lb. semi-active laser guided missile, capable of defeating any known armor. The M272 launchers are able to hold four Hellfire missiles each. The minimum engagement range is .5 KM to a maximum of 8 KM. The missile can be designated by any ground or air NATO standard laser designator.

MH-60 Deployability

The MH-60 can be deployed by C-17, C-5A/B and C-141 aircraft. A maximum of six MH-60s can be loaded on a C-5A/B. Approximately one hour is needed to prepare the helicopters for on-load and again for rebuild on arrival at the destination. A maximum of four MH-60s can be loaded on C-17 aircraft. Approximately one hour is needed to prepare the helicopters for on-load and again for rebuild at the destination. A maximum of two MH-60s can be loaded on a C-141, requiring considerable time for preparation and rebuild. Ammunition for the weapon systems is palletized and loaded on the same aircraft for distribution at the destination.

MH-60 Mission Planning

Table 3-5. MH-60 Planning Data

Aircrew Composition	Four crew members are required for most training flights and all NVG operations. They include a pilot-in-command (PIC), pilot (PI), and two crew chief/gunners (CE). One CE is stationed at each gunner's position. He scans, operates the hoist, conducts FRIES operations, operates the minigun, and conducts external load operations.
Crew Qualifications	All crews are qualified to support flight operations for the missions stated in Joint Pub 3-05 for Joint Special Operations. Crew qualifications include multi-ship NVG infiltration, exfiltration, and live-fire operations in urban, overwater, mountain, desert, jungle, and NBC environments to LZs, buildings, ships, and oil rigs. Crews are trained in NVG long range overland and overwater navigation, with an arrival standard of ± 30 seconds. MH-60K crews are qualified in aerial refueling operations.
Weather minimums	500 ft ceiling and 2 miles visibility for training and planning; METT-T dependent for operational missions.
Environmental Restrictions	No severe turbulence. No heavy icing. 45 knot winds maximum allowable for engine start and shutdown.
Landing area required	Minimum size for air-land is 100 feet x 100 feet.
Aircraft (MH-60L)	Maximum gross weight: 22,000 lbs (MH-60K: 24,000lbs) Troop capacity 7 troops with seats, 8 - 12 troops without seats

Table 3-6. MH-60L and MH-60K Performance Characteristics

Normal cruise airspeed	120 knots
Maximum dash airspeed	178 knots
Normal mission range (no A/R)	450 NM
Normal mission endurance (no A/R)	4 hrs, 20 min

MH47D/E CHINOOK**MH-47E****Mission**

The MH47 conducts overt and covert infiltrations, exfiltrations, air assault, resupply, and sling operations over a wide range of environmental conditions (see Tables 3-6 and 3-7). The aircraft can perform a variety of other missions including shipboard operations, platform operations, urban operations, water operations, parachute operations, FARP operations, mass casualty, and combat search and rescue operations. The 160th SOAR(A) currently operates two models: the MH-47D Adverse Weather Cockpit (AWC), operated by 3/160; and the MH-47E, operated by 2/160.

The MH47 is capable of operating at night during marginal weather conditions. With the use of special mission equipment and night vision devices, the air crew can operate in hostile mission environments over all types of terrain at low altitudes during periods of low visibility and low ambient lighting conditions with pinpoint navigation accuracy \pm 30 seconds on target.

MH-47D Adverse Weather Cockpit (AWC)

The MH47D Chinook is a twin engine, tandem rotor, heavy assault helicopter that has been specifically modified for long range flights. It is equipped with weather avoidance/search radar; an aerial refueling (A/R) probe for in flight refueling; a Personnel Locator System (PLS) used in conjunction with the PRC 112 for finding downed aircrews; Forward Looking Infrared (FLIR); and a navigation system consisting of a Mission Computer utilizing GPS/INS/Doppler navigation sources for increased accuracy; secure voice communications, including FM, UHF with Have Quick II, VHF, HF, Saber and SATCOM radios; a Fast Rope Insertion Extraction System (FRIES) for insertion of personnel/equipment and extraction of personnel; a defensive armament system consisting of two M-134 machine-guns (left forward cabin window, right cabin door) and one M-60D machine-gun located on the ramp; and an internal rescue hoist with a 600 lb. capacity.

MH-47E

The MH-47E is a heavy assault helicopter based on the CH-47 airframe, specifically designed and built for the special operations aviation mission. It has a totally integrated avionics subsystem which combines a redundant avionics architecture with dual mission processors, remote terminal units, multifunction displays and display generators, to improve combat survivability and mission reliability; an aerial refueling (A/R) probe for in flight refueling; external rescue hoist; and two L714 turbine engines with Full Authority Digital Electronic Control which provides more power during hot/high environmental conditions. Two integral aircraft fuel tanks replace the internal auxiliary fuel tanks commonly carried on the MH-47D AWC, providing 2068 gallons of fuel with no reduction in cargo capacity.

MH-47D/E Standard Mission Equipment

The MH-47 is configured with the following equipment:

- Aircraft communications equipment consists of FM, UHF (with HAVE QUICK II capability), VHF, HF, SATCOM, and the Motorola Saber. The MH-47E is equipped with SINCGARS VHF-FM single channel ground and airborne radio system.
- Automatic Target Hand-off System (ATHS) provides the capability of data bursting pre-selected/formatted information to other equipped aircraft or ground stations.
- A navigation system consisting of a Mission Computer utilizing GPS/INS/Doppler navigation sources for pinpoint navigation.
- Weapons systems. The MH-47 has three weapons stations; left forward window, right cabin door and at the ramp. The forward stations mount a 7.62mm mini-gun and the ramp station mounts a M60D 7.62 machine gun. A crew member at each station manually operates the weapon. The weapons are used primarily for self-defense and enemy suppression.
 - The mini-gun is normally used for soft targets and troop suppression which requires a high rate of fire.
 - The mini-gun is air cooled, link fed and has a maximum effective range of 1500 meters with tracer burnout at 900 meters. The weapon has an adjustable rate of fire of 2000 or 4000 rds per minute. The crew members currently fire ball/slap ammunition with a mix of four ball to one tracer, 4:1, or a 9:1 mix to prevent NVD shutdown on low illumination nights. The ammunition complement without reloading is 8000 rds. per weapon.
- Fast Rope Insertion Extraction System (FRIES). May be utilized for insertion and extraction of personnel.
 - Applied loads at the rear ramp for insertions will not exceed 9 persons per rope at the same time.
 - Applied loads at the rear ramp for extractions will not exceed 6 persons per rope at the same time.

- Internal Rescue Hoist. Is configured for use at the center cargo hook/rescue hatch. It has a 600 lb. capacity and approximately 150 feet of useable cable.
- External Rescue Hoist (MH-47E only). Is configured for use at the right front cabin door and has a 6000 lb. capacity with 245 feet of useable cable. Also Fastrope capable with hoist installed.
- External Cargo Hook System. Each hook may be used separately or in conjunction with each other. All loads should be planned as a tandem rigged load, this will facilitate greater load stability and insure faster airspeeds during flight. Hook limitations are as follows:
 - Forward Hook - 17,000 lb.
 - Center Hook - 26,000 lb.
 - Aft Hook - 17,000 lb.
 - Tandem Hook - 25,000 lb.

NOTE

These are maximum hook rated loads and may not accurately reflect the true capability of the aircraft due to external conditions, i.e., pressure altitude and temperature.

MH-47 D/E Mission Flexible Equipment

- Forward Looking Infrared (FLIR), AN/AAQ-16, is a controllable, infrared surveillance system which provides a TV video-type infrared image of terrain features and ground or airborne objects of interest. The FLIR is a passive system and detects long wavelength radiant IR energy emitted, naturally or artificially, by any object in daylight or darkness.
- Map Display Generator (MDG) (MH-47E only), when used with the Data Transfer Module (DTM) displays aeronautical charts, photos, or digitized maps in the Plan and 3D modes of operation.
- Cargo Compartment Expanded Range Fuel System (CCERFS), consists of one and up to three ballistic tolerant, self sealing tanks. Each tank holds 780 gallons of fuel. They are refillable during aerial refuel operations.
- Forward Area Refueling Equipment, (FARE), consists of fueling pumps, hoses, nozzles, and additional refueling equipment to set up a two-point refueling site. Gallons of fuel dispensed is dependent upon range of operation required of the tanker aircraft.

MH-47D/E Deployability

- 2 MH-47s may be transported in a C-5. Build-up time is approximately 8 hours.
- 2 MH-47s may be transported in a C-17. Build-up time is approximately 8 hours.
- MH-47s can self-deploy over extended distances using ground or aerial refuel.

MH-47 Mission Planning

Table 3-7. MH-47D/E Mission Planning Data

Aircrew Composition	Five crew members are required for most training, exercise, or operational/ contingency missions. Crew members include pilot, co-pilot, flight engineer, and two crew chiefs. The flight engineer is usually positioned at the ramp station. He scans for other aircraft/targets/ obstacles, operates the hoist (when required), assists in FR operations, operates the machine gun, and conducts sling load operations. The crew chiefs are positioned at the left and right forward gunners stations. They scan for other aircraft/targets/obstacles and operate the miniguns, assist in sling load and FR operations.
Crew Qualifications	All crews are qualified to support flight operations for the missions stated in Joint Pub 3-05 Doctrine for Joint Special Operations. Crew qualifications include NVG Infil and Exfil operations to urban, overwater (ship, oil rigs), mountainous, desert and jungle objectives arriving at the target at a prearranged time \pm 30 seconds. Crews are trained in formation live fire, long range night NVD operations over land and water. MH-47E crews are also qualified to perform aerial refueling operations.
Weather minimums	500 ft ceiling and 2 miles visibility for training and planning; METT-T dependent for operational missions.
Environmental Restrictions	No severe turbulence. Light icing maximum for MH-47D, moderate icing for MH-47E. 30 knot wind maximum for engine start and shutdown.
Crew duty day	Normal: 14 hours Maximum: 18 hours
Landing area required	100ft x 150ft
Aircraft (MH-47D)	Maximum gross weight: 50,000 lbs (54,000 lbs with waiver) Cargo area Height - 78 inches (unobstructed) Width - 90 inches Depth - 366 inches Troop capacity 33 troops with seats* 65 troops without seats* 24 litters FARP capability - 2320 gallons (max. with limited aircraft range)
Aircraft (MH-47E)	Maximum gross weight: 54,000 lbs Cargo area Height - 78 inches (unobstructed) Width - 90 inches Depth - 366 inches Troop capacity 44 troops with seats* 65 troops without seats* 24 litters FARP capability 2320 gallons (max. with limited aircraft range)

NOTE

Actual amounts are dependent upon infil/exfil distances flown and number of internal auxiliary fuel tanks installed or if aerial refueling is available.

Table 3-8. MH-47D and MH-47E Performance Characteristics

Normal cruise airspeed	120 knots
Maximum dash airspeed	170 knots
Normal fuel burn rate	2750 lbs per hour
Maximum altitude	20,000 feet

NOTE

Actual figures are dependent upon temperature, aircraft gross weight, and density altitude.



MH-47E Carrier Deck Landing



ARMY CIVIL AFFAIRS AND PSYCHOLOGICAL OPERATIONS COMMAND (AIRBORNE)

The US Army Civil Affairs and Psychological Operations Command (Airborne) is the headquarters for Army Civil Affairs and Psychological Operations units. Of USACAPOC(A)'s approximately 9,000 soldiers, about 83 percent are in the Reserve component and are located in 26 states and the District of Columbia. USACAPOC(A) units provide support to all theater commanders in meeting their global commitments. USACAPOC(A) soldiers have contributed significantly to recent humanitarian missions. They assisted victims of Hurricane Andrew in Florida, coordinated refugee operations for Cubans and Haitians in Cuba, and were among the first

soldiers sent to Somalia and Haiti. Unique training, experience, and the abilities of USACAPOC(A)'s soldiers make them an ideal asset in dealing with national priorities.

Organization

The command has one active duty Psychological Operations unit, the 4th Psychological Operations Group (Airborne), with five battalions; and one active duty Civil Affairs unit, the 96th Civil Affairs Battalion (Airborne), with six companies. Both units are located at Fort Bragg, North Carolina. USACAPOC(A), also headquartered at Fort Bragg, is one of four major commands comprising the US Army Special Operations Command.

Personnel

USACAPOC(A) soldiers maintain the highest standards of training and physical readiness in order to be prepared to deploy anywhere in the world on short notice. Although Civil Affairs and Psychological Operations activities often complement each other, each battle system operates individually in support of field commanders.

The theater SOC integrates PSYOP and CA support into joint SOF activities. Task-organized PSYOP and CA detachments, from theater PSYOP and CA forces, may be attached to the theater SOC for a specific period to provide dedicated support. CA and PSYOP support provide the SOF commanders and their indigenous counterparts the ability to motivate and mobilize crucial segments of the population to enhance the probability of mission success.

US Army Psychological Operations Forces

The US Army maintains Active Component (AC) and Reserve Component (RC) forces to plan and conduct PSYOP. These units are available to support combatant command training exercises and to furnish advice and assistance (JP 3-53).

US Army PSYOP forces plan and execute the Joint Force Commanders' PSYOP activities at the strategic, operational, and tactical levels; support all special operations missions; and conduct PSYOP in support of consolidation missions. Specially trained units support enemy prisoner of war (EPW) missions. US Army PSYOP group and battalion headquarters are structured to provide command and control of subordinate units that conduct PSYOP missions.

All AC and RC US Army PSYOP forces are assigned to the US Army Civil Affairs and Psychological Operations Command (USACAPOC), a major subordinate command of the US Army Special Operations Command (USASOC), at Fort Bragg, North Carolina. The AC forces are organized under the 4th Psychological Operations Group with four regionally oriented battalions, a tactical support battalion, and a PSYOP dissemination battalion. See Figure 3-5.

PSYOP Group (POG)

The Psychological Operations (PSYOP) Group plans and conducts PSYOP activities authorized and implemented worldwide in support of all non-mobilization contingencies during crisis and open hostilities short of declared war. It also develops, coordinates, and executes peacetime PSYOP activities. In addition, should war be declared, the PSYOP Group assists in the planning and execution of strategic and operational PSYOP for the unified command CINCs.

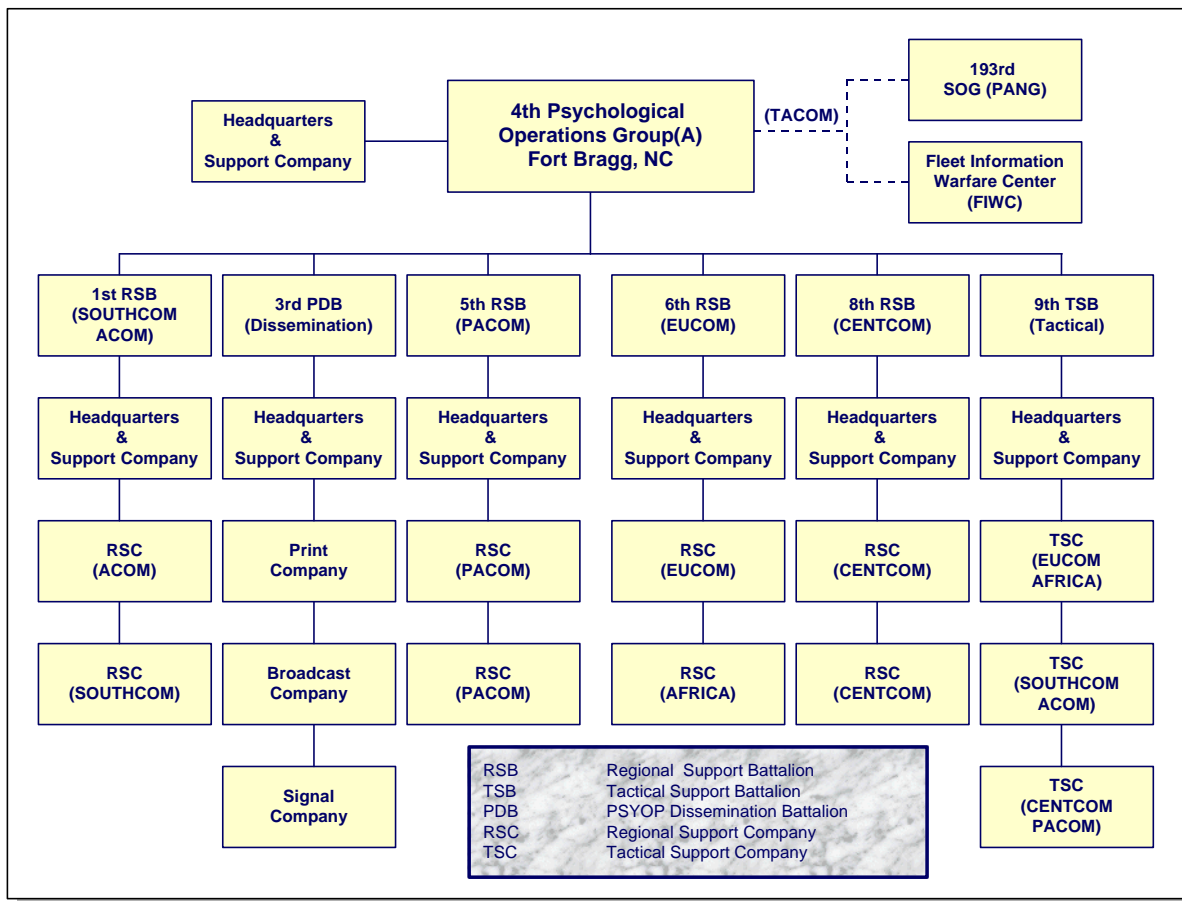


Figure 3-5. Organization of the 4th Psychological Operations Group (Airborne)

PSYOP Dissemination Battalion (PDB)

The PSYOP Dissemination Battalion provides audiovisual and printed material production, signal support, and media broadcast capabilities to support the PSYOP group, Regional Support Battalions (RSB), and the Tactical Support Battalions (TSB). This battalion is capable of deploying these capabilities or can produce products at Fort Bragg. If host nation support agreements are in place, PSYOP personnel can print on foreign presses and broadcast from surrogate stations in theater. The PSYOP Dissemination Battalion also provides many non-PSYOP specific support service to the PSYOP Group like communications and electronic maintenance services.



A PSYOP Dissemination Battalion Soldier Prepares Leaflets For Cutting

PSYOP Regional Support Battalion (RSB)

The PSYOP Regional Support Battalion (RSB) consists of a headquarters element, a support company, and one or more regional support companies. Each regional battalion divides geographic responsibility between their subordinate companies and further to the individual Product Development Centers (PDC) at the Operational Detachment (OPDET) level. A PDC consist of a team of 10-15 soldiers who develop audio, visual, and audiovisual product prototypes in support of the PSYOP campaigns. Each RSB is supported by a Strategic Studies Detachment (SSD) that is staffed by civilian analysts and produces PSYOP studies for the regional CINCs.



*A PSYOP Soldier Uses the Product Development Workstation (PDWS)
During Operation Restore Hope*

PSYOP Tactical Support Battalion (TSB)

A Tactical Support Battalion (TSB) provides tactical PSYOP support for one rapid deployment corps' contingency requirements and, as required, the SOF community. The battalion consists of a headquarters and support company and one or more tactical support companies. The Tactical Support Battalion serves as the Corps PSYOP Support Element (CPSE) and assigns its subordinate Tactical Support Companies (TSC) to serve as the Division PSYOP Support Elements (DPSE). DPSEs are further supported by their platoons in the form of Brigade PSYOP Support Elements (BPSE). The smallest unit of tactical PSYOP support is the three-soldier Tactical PSYOP Team (TPT).

Reserve Component Psychological Operation Forces

The majority of the Army's PSYOP forces rest in the Army Reserve. During peacetime, RC PSYOP personnel will actively participate with AC PSYOP personnel in an integrated planning and training program to prepare for regional conflicts or contingencies. RC personnel and forces will also be involved with the AC in the planning and execution of peacetime PSYOP programs. In wartime, RC PSYOP personnel or units may be mobilized by the service, as required by combatant commanders, to augment AC PSYOP forces. RC PSYOP forces can also continue peacetime PSYOP programs in the absence of AC PSYOP forces when mobilized or directed. RC PSYOP Groups and Battalions possess the capability to deploy a PSYOP task force if required.

Psychological Operation Equipment

US Army PSYOP equipment is instrumental in the development and dissemination of PSYOP products. Unique equipment assets include 10 kilowatt and 50 kilowatt TV and radio broadcast transmitters, print systems, loudspeakers, and mobile audiovisual vans.



A PSYOP Soldier Packs a M129E Leaflet Bomb During Operation Desert Shield/Storm

US Army Civil Affairs (CA) Organization

CA units are designed to provide support to both GP and SO forces at the tactical, operational, and strategic levels. The vast majority of army CA forces are in the reserve component (RC). The army's active component (AC) CA unit (96th CA BN, Ft. Bragg, NC) is capable of rapidly deploying one of its five regionally aligned CA companies to meet the initial CA support requirement, with transition to RC units beginning as soon as mobilization permits.

The RC civil affairs units have functional specialties, with the unit's soldiers being assigned to functional teams. The functional specialties are:

Government Section

- Legal
- Public administration
- Public Education
- Public Health
- Public Safety

Economic/Commerce Section

Economic Development
 Civilian Supply
 Food and Agriculture

Public Facilities Section

Public Communications
 Transportation
 Public Works and Utilities

Special Functions Section

Cultural Relations
 Civil Information
 Dislocated Civilians
 Emergency Services
 Environmental Management

Civil Affairs Command

The five reserve component CA commands provide predeployment command and control to their geographically oriented CA brigades and battalions. CA commands provide support to their respective warfighting CINC. They are usually the senior CA unit in theater and aligned to the Theater Army (TA) (see Figure 3-6).

The command's mission is to plan, manage and conduct CA operations that support the TA commander. The CA command may also provide staff support to the TA component services and joint theater staff as required. The CA Commands are responsible for the training, equipping, and preparation of their subordinate units for mobilization and deployment both in war and in support of peace operations. When deployed CA units are attached to the supported command. Civil Affairs commands have all the CA functional specialties organized in functional teams.

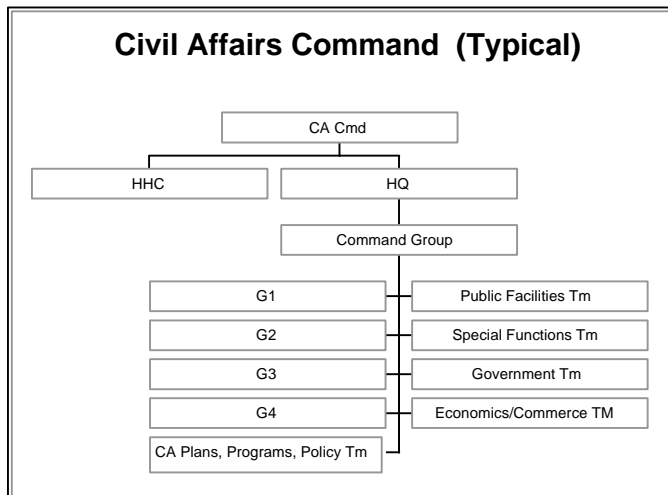


Figure 3-6. CA Command Typical

Civil Affairs Brigades

The Civil Affairs brigades support the corps and the JTF, TA, theater support command, and TA area commands. The CA brigades provide predeployment command and control to their battalions. The CA brigade accomplishes its mission through attachment of its subordinate battalions. The CA brigades are responsible for the training, equipage, and preparation of their subordinate units for mobilization and deployment both in war and support of peace operations. When a CA brigade is designated the senior CA unit in theater, it is aligned to a Theater Army, and assumes the duties of a CA command. It is the lowest level unit that has representation of all of the CA functional specialties (Figure 3-7).

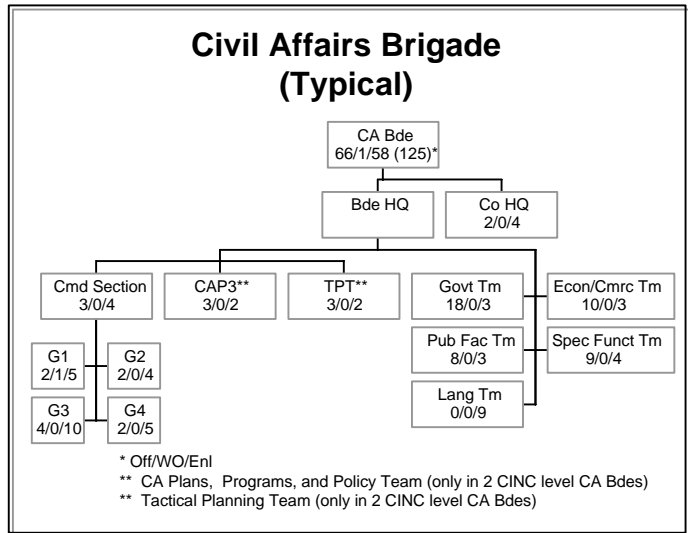


Figure 3-7. CA Brigade Typical

Civil Affairs Battalions

There are three types of Civil Affairs battalions; the General Support (GS), General Purpose(GP) and Foreign Internal Defense/Unconventional Warfare (FID/UW) (see Figures 3-8 through 3-10).

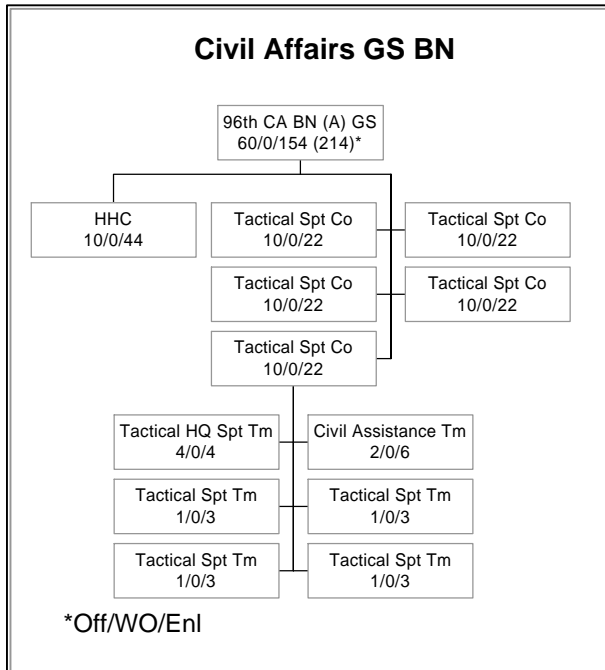


Figure 3-8. Civil Affairs GS BN

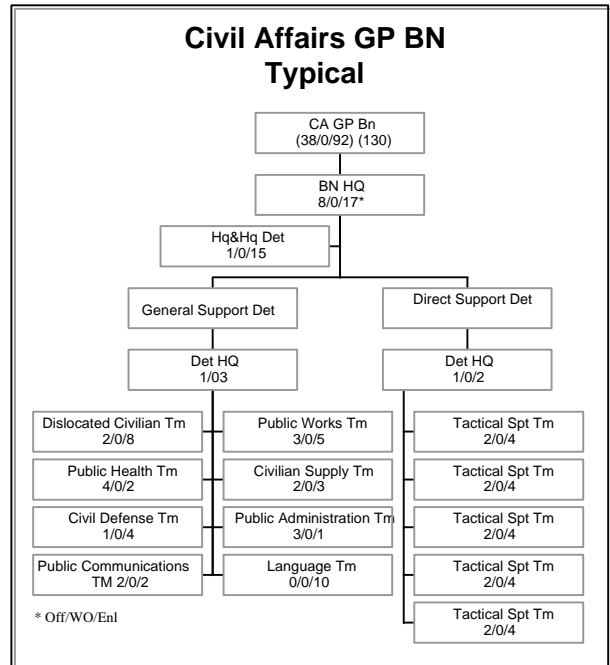


Figure 3-9. Civil Affairs GP BN Typical

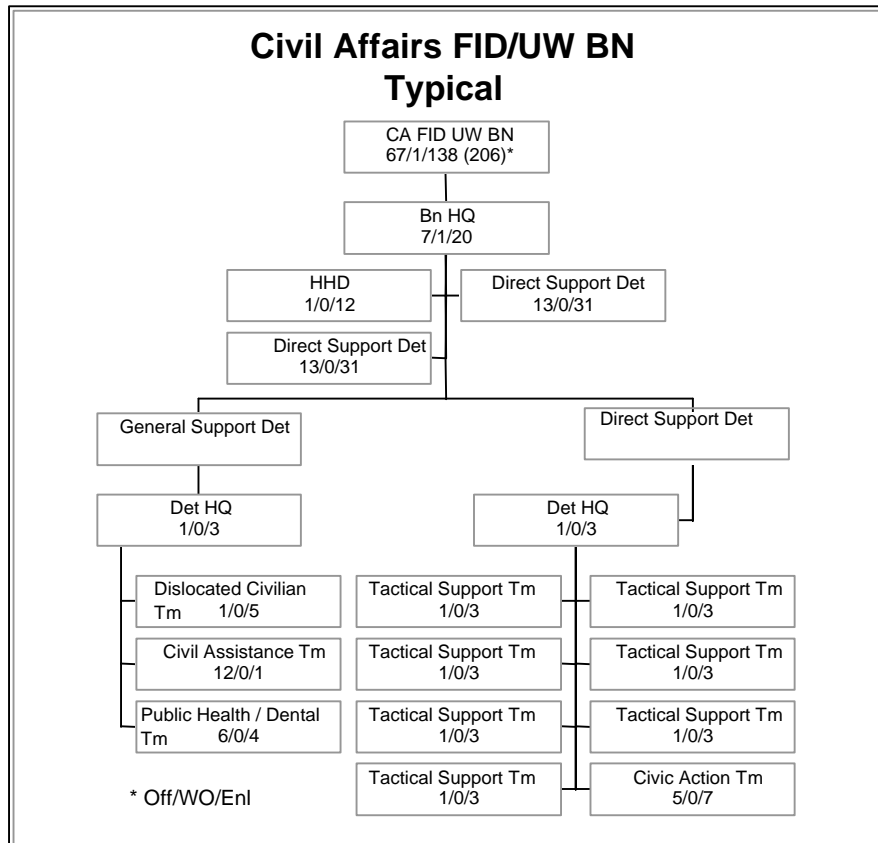


Figure 3-10. Civil Affairs FID/UW BN Typical

The GS battalion is the army's only active duty CA battalion and it is responsible for planning and conducting CA activities in support of military operations. Composed of CA generalists, it provides immediate operational access to CA assets for the regional CINCs, through the GS battalion's regionally aligned companies.

The CA battalion (GP) mission is to plan and conduct CA activities in support of a division, a corps support command, or an area support group. It supports planning and coordination of CA and foreign nation support operations. The unit provides Civil Affairs functional area specialists in the following areas:

- Public Administration
- Dislocated Civilians
- Civilian Supply
- Public Communications
- Public Health
- Public Work and Utilities

The primary mission of the reserve components' CA battalion FID/UW is to support the theater SOC, the JSOTF, the SF group headquarters. Its secondary mission is providing CA support to conventional forces. The following are examples of possible CA organizations.

SPECIAL OPERATIONS SUPPORT COMMAND (SOSCOM)

SOSCOM mission is to plan and coordinate with Theater Army (TA). SOSCOM, and ARSOF to assure combat service support (CSS), health service support (HSS), and signal support to ARSOF supporting the warfighting CINCs during deliberate and crisis actions. SOSCOM is a Major Subordinate Command (MSC) of the United States Army Special Operations Command. As an MSC, the SOSCOM Commander is responsible for the administration, training, maintenance, support and readiness of assigned forces. SOSCOM is comprised of a headquarters staff, six forward deployed Special Operations Theater Support Elements (SOTSEs), the 528th Support Battalion, the 112th Signal Battalion, and the USASOC Material Management Center (MMC).

Special Operations Theater Support Elements

The SOTSE is the staff coordinator for ARSOF support requirements at the Army Service Component Command (ASCC). Embedded in the ASCC, the SOTSE staff has knowledge of the resources available to all other Army forces apportioned to the theater. Working with theater logisticians, the SOTSE can thereby identify requirements and plan for and coordinate ARSOF sustainment.

528th Support Battalion

The 528th Support Battalion's mission is to provide rapid deployable CSS and HSS to ARSOF as directed. The 528th Support Battalion's strengths lie in its capability to support ARSOF unique and low density weapons and vehicles. The 528th complements ARSOF CSS, HSS, and signal units. The support battalion consists of a headquarters and main support company (HMSC), three forward support companies (2 active and 1 reserve component) and may receive augmentation from Theater Army.

HMSC capabilities include:

- Operates a Supply Support Activity (SSA) for Class II, IV, VII, and IX.
- Airdrop services to rig 80 personnel chutes daily and limited heavy drop rigging.
- Provide food service support to 500 personnel.
- Contracting services that provides payment for host nation supply, services, and facilities.
- Provide medical Level I and Level II care, has a 20 patient holding capability, provide advanced trauma management, emergency dental, and limited preventative medicine and x-ray facilities.

Forward Support Companies capabilities include:

- Class I: Receive, store and issue 4.24 short tons (ST) daily.
- Provide food service to 500 personnel daily.
- Class III: Establish and operate FARES, capacity to store 50,000 gallons, receive and issue 30,000 gallons daily.

- Class II, IIP, IV, VII, IX: Receive, store and issue up to 25 ST daily.
- Class V: Operate one ammunition transfer point, transload 20 ST daily.
- Water: Purify 24,00 gallons daily with limited distribution.
- Maintenance: Direct support (DS) maintenance on wheeled vehicles, small arms, power generators, and engineer equipment with limited recovery capability.
- Transportation: Movement control and Arrival/Departure Airfield Control Group (A/DACG), 200 personnel in one lift; 8000 gallons of water in 500 gallon blivets.
- Base support services: Supervise establishment of base, maintain and operate base, with limited vertical engineer construction.
- Medical Service: Advance trauma management, ground evacuation (8 personnel), limited preventative medicine, limited dental, limited lab; receive, store, and issue 2.25 ST of Class VIII.

Theater augmentation provides:

- Mortuary services
- Laundry and bath services
- STAMIS integration
- Base security
- Strategic resupply
- Backup DS and GS maintenance

112th Signal Battalion

The 112th Signal Battalion supports deployed joint and Army task force special operations. Capable of providing signal services to two theaters simultaneously, it ensures flexible communications among unified commanders, joint forces special operations component commands, each of the subordinate service SOF component commands, and other commands as directed.

The signal battalion is made up of a headquarters and headquarters company (HHC), and two special operations signal companies. The HHC consists of the battalion headquarters, and four special operations communications elements that are forward deployed in Panama, Germany, Korea, and Hawaii.

Each special operations signal company engineers, installs, operates, and maintains, two full signal centers, normally located at the JSOTF or ARSOTF headquarters. Each company consists of a company headquarters, joint special operations task force platoon and a support platoon.

The JSOTF platoon is subdivided into the following:

- Platoon headquarters
- Two satellite communications (SATCOM) teams
- Four high frequency (HF) multi-channel sections
- Net radio interface (NRI) team
- Switchboard section
- Communications center team
- Technical control team
- Four special operations communications assemblage teams

The support platoons consist of a headquarters and the following teams:

- Four HF multi-channel teams
- Three SATCOM teams
- NRI team
- Communications center team
- Technical control team
- Three assemblage teams

Signal elements draw their logistic support from the headquarters they are supporting. The special operations signal battalion provides motor and signal maintenance for their own systems. It can only provide organizational maintenance on vehicles and generators and up to direct support maintenance on signal equipment. The TA provides Army common repair parts on a nonreimbursable basis to SOF.

Material Management Center (MMC)

The MMC provides the ARSOF with centralized and integrated material management of property, equipment, maintenance, logistic automation, and repair parts and supplies (less Class V and VII).

CHAPTER 4

US NAVAL

SPECIAL OPERATIONS FORCES



CHAPTER 4

US NAVAL SPECIAL OPERATIONS FORCES

NAVAL SPECIAL WARFARE COMMAND (NAVSPECWARCOM)

Naval Special Warfare Command was commissioned on 16 April 1987 at the Naval Amphibious Base in Coronado, California, and is the Naval component to the United States Special Operations Command (see Figure 4-1). The mission of Commander, Naval Special Warfare Command (COMNAVSPECWARCOM) is to prepare Naval Special Warfare forces to carry out assigned missions and to develop maritime special operations strategy, doctrine, and tactics. COMNAVSPECWARCOM exercises operational control of all United States-based Naval Special Warfare Command training, operational control of all United States-based Naval Special Warfare forces and responsibility for the training, equipping, supporting, and providing trained and ready forces to the combatant commanders. Commander, Naval Special Warfare Command is a Navy Flag Officer, a Rear Admiral.

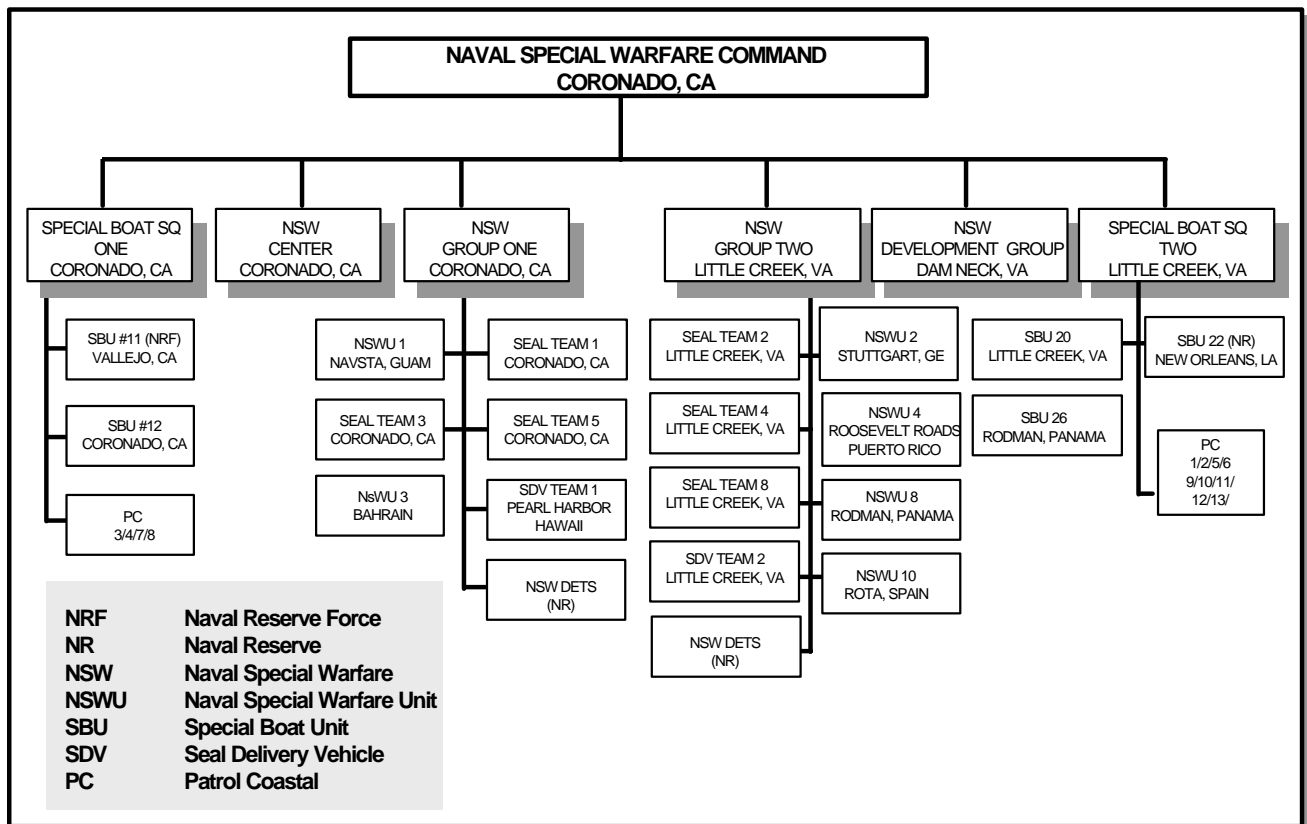


Figure 4-1. Naval Special Warfare Command Organization

Naval Special Warfare Mission

Naval Special Warfare (NSW), provides an effective means to apply counterforce in conjunction with national policy and objectives in peacetime and across the spectrum of hostilities from peacetime operations to limited war to general war. NSW forces focus on the conduct of the following five principal mission areas of special operations:

- Unconventional Warfare (UW)
- Direct Action (DA)
- Special Reconnaissance (SR)
- Foreign Internal Defense (FID)
- Combating Terrorism (CBT)

Additionally, NSW forces are involved in collateral activities such as Security Assistance, Anti-Terrorism, Counterdrug, Personnel Recovery and Special Activities. NSW also provides maritime specific special operations to meet US Navy fleet-specific requirements.

NAVAL SPECIAL WARFARE PERSONNEL

Naval Special Warfare Officer

NSW Officers go through the identical Basic Underwater Demolition/SEAL (BUD/S) Training that enlisted personnel attend at the Naval Special Warfare Center. Following BUD/S, it generally takes an additional six months to one year for an officer to become fully qualified. A Naval Special Warfare Officer can expect to spend his entire career in a variety of special operations assignments ranging from operational SEAL and SDV Teams to Joint Staffs, or Naval Special Warfare Groups.

Navy Enlisted SEAL

The Navy enlisted SEAL is a highly competent and qualified member of the Special Operations Community. All Navy SEALs go through the six month Basic Underwater Demolition/SEAL, (BUD/S), Training at the Naval Special Warfare Center. Upon completion of BUD/S, all SEALs attend Basic Airborne training and then report to their first operational SEAL or SDV Team. SEAL operators assigned to a SDV Team must also complete SDV school which is generally attended enroute to, or within three months of arrival at their new command. As an essential part of their qualification process, all SEALs must attend a three month SEAL Tactical Training (STT) course at their gaining command where they further enhance their operational skills and field craft. Upon completion of STT, SEALs are assigned to an operational SEAL platoon or SDV task unit for their initial operational assignment. The process of training, education, and qualification is continued throughout their careers through a combination of formal and informal processes including on-the-job skills training, and attendance at various service or SOF training commands, and civilian courses of instruction. Once qualified, and enlisted SEAL can expect to spend the remainder of his career in the special operations community.

Special Warfare Combat Craft Crewmember

Combat Crewmen are assigned to Special Boat Units to operate the various Special Warfare craft assigned to the SBUs. A Combat Crewman attends advanced training at the Naval Special Warfare Center and then is assigned to a SBU. Combat Crew members may be parachute qualified and may have specialized special warfare skills in addition to their Combat Crewman skills.

NAVSPECWARCOM ORGANIZATION

Naval Special Warfare units are organized, trained, and equipped to conduct special operations in maritime and riverine environments. They are deployed in small units worldwide in support of fleet and national operations. NSW provides an effective means to apply counterforce in conjunction with national policy and objectives in peacetime and across the spectrum of hostilities from peacetime operations to limited war to general war.

Naval Special Warfare Center

The Naval Special Warfare Center located on the Naval Amphibious Base in Coronado is the schoolhouse for much Naval Special Warfare training. It is a major component command of the Naval Special Warfare Command and is commanded by a NSW Captain (O-6). In addition to the 26 week BUD/S and nine week Special Warfare Combatant Crewman (SWCC) courses, the Center also conducts advanced maritime special operations training for NSW and other service component SOF personnel. The Center maintains a detachment at the Naval Amphibious Base, Little Creek, Virginia for selected training of personnel assigned to commands on the east coast.

Naval Special Warfare Development Group

The Naval Special Warfare Development Group, located in Little Creek, VA., is commanded by a Navy Captain (O-6). It is a major component command of the Naval Special Warfare Command. The Naval Special Warfare Development Group provides centralized management for the test, evaluation, and development of current and emerging technology applicable to Naval Special Warfare forces. This command also develops maritime ground and airborne tactics for Naval Special Warfare and possible Department of Defense-wide application. Administrative control is with Naval Special Warfare Command.

Naval Special Warfare Groups

NSW Groups are echelon II Captain (O6) major commands established by NAVSPECWARCOM at NAB Coronado and NAB Little Creek to equip, support, and provide command and control elements and trained and ready SEAL and SDV platoons and forces to the geographic CINCs.

NSW Groups ONE and TWO are organized into:

- Three SEAL Teams, comprised of eight 16-man platoons, which conduct reconnaissance, DA, UW, FID, and other operations in maritime or riverine environments.
- One SDV Team which operates and maintains submersible systems that deliver and recover SEALs in hostile areas and conduct reconnaissance and DA missions.

- NSW Units, which are small command and control elements located outside the continental United States, support other NSW forces assigned to theater SOCs or components of naval task forces.

Naval Special Warfare Command Combat Service Support Teams (CSST)

One CSST is assigned to each NSW Group to provide full-spectrum logistic support for designated SEAL Teams, Special Boat Units, NSW Task Groups/Task Units and/or special mission units. Tasking for each CSST shall include three primary mission elements:

- OPLAN/CONPLAN and crisis-action logistic planning and coordination
- In-theater contracting, small purchase and lease actions
- Comprehensive forward operating base support

Within these mission elements, the CSST is responsible for force embarkation, load-planning, multi-modal transport coordination, combat cargo handling, in-theater logistic coordination, Military Liaison Officer/Defense Attaché Officer liaison, exercise related construction, infrastructure support, contingency engineering, expeditionary camp siting and development, camp maintenance, NBC decontamination, and defensive combat planning and execution.

NOTE

Mutual interoperability activities between NSW CSST, USSOCOM's Deployment Cell, 528th Special Operations Support Battalion, USAF Red Horse units, SEABEES and other selected DoD units are pursued to establish seamless support capabilities and to foster a clear understanding of individual Service procedures applied in a joint context.

Naval Special Warfare Task Groups and Task Units

Naval Special Warfare Task Groups (NSWTG), and Task Units (NSWTU), are task organized, tailored in size and composition to the mission, and resourced from NSWG and subordinate commands. They may operate unilaterally, jointly, or in combined operations. Their mission is to provide command and control, administration, and logistic support for assigned units. OPCON of designated NSW forces may be assigned to a JSOTF or with a fleet commander to support fleet amphibious and/or strike operations. The NSWTG and NSWTU are flexible in size and composition. Several NSWTUs can be operationally subordinate to a NSWTG, or a NSWTU could report directly to a JSOTF, if the scope of operations and size of the deployed force is limited.

Special Boat Squadrons

Special Boat Squadrons (SBR) are echelon II Captain's major commands established by NAVSPECWARCOM at NAB Coronado and NAB Little Creek to equip, support, and provide trained and ready special operations ships and craft to the geographic CINCs. Each command is comprised of one or more active or reserve component Special Boat Units (SBUs) and CYCLONE Class Patrol Coastal (PC) ships.

Special Boat Units

Special Boat Units (SBUs) are organized, trained and equipped to operate a variety of special operations surface craft in both the maritime and riverine environments. Their unique capabilities in the littoral battle space includes the ability to transition from the blue water open ocean to beach landing sites, to operations within inland maritime lines of communication (i.e. the riverine environment).



SEALs manning the Patrol Boat Riverine (PBR) In A Direct Action Mission.

Special Boat Unit Mission

The mission of an SBU is to employ, operate and maintain a variety of surface combatant craft to conduct and support naval and joint special operations, riverine warfare, and coastal patrol and interdiction.

Special Boat Unit Capabilities

The SBU is capable of infiltrating and exfiltrating forces, providing small-caliber gunfire support, conducting coastal patrol, surveillance, harassment, and interdiction of maritime lines of communication, FID operations, deception operations, search and rescue operations, and armed escort.

Special Boat Unit Limitations

SBU's are limited in range based on fuel, sea state, and currents. They are limited in size and amount of equipment and weapons that can be carried, require a support base or platform for an extended deployment, and require extensive air or sealift to deploy to a forward theater of operations.

SEAL Delivery Vehicle Task Unit

The SDV Task Unit is an operational element employed to plan, coordinate, and command submersible systems operations from specially configured submarines equipped with Dry Deck Shelters (DDS). The SDV Task Unit is normally commanded by a SDV Team commanding officer or executive officer and comprised of one or more SDV or SEAL Platoons. When embarked in a submarine with DDS attached, the DDS platoon commander reports to the submarine commanding officer as a department head and does not fall under the operational control of the SDV Task Unit commander.

SEAL Delivery Vehicle Task Unit Mission

SDV Units are organized, trained and equipped to operate and maintain combat submersible systems and conduct specialized missions utilizing the Dry Deck Shelter/Host Submarine as an insertion/extraction platform.

SEAL Delivery Vehicle Task Unit Capabilities

SDV Unit capabilities include limited DA missions such as port and harbor anti-shipping attacks and raids. Special mission units, using the SDV from the DDS, or the DDS alone, can conduct a variety of DA missions in the maritime environment. SDV Task Units conduct hydrographic reconnaissance and other intelligence-gathering missions and infiltrate, exfiltrate, and resupply SOF.

SEAL Delivery Vehicle Task Unit Limitations

SDV missions are limited in their speed and distance by propulsion systems, sea state, weather, and water temperature. SDVs can carry a limited amount of equipment. Extensive training is required to maintain proficiency in operational skills required to operate from the DDS. SDV Task Units require a host submarine as the optimum means of mobility to and from the objective area. SDV Task Units require a support base for extended employment. Specific logistics are required to support a SDV task unit that are unique to SDV Teams.

SEAL Platoon

The SEAL platoon is the largest operational element that will normally be employed to conduct a tactical mission. Multi-platoon operations should not be planned or conducted without extensive preparations and rehearsals. A SEAL platoon is normally commanded by a Navy Lieutenant (O-3). A platoon consists of 16 SEALs and may divide into 2 squads or 4 elements. All SEAL platoon personnel are dive, parachute, and demolitions qualified.

SEAL Platoon Mission

SEAL platoons are organized and trained to conduct DA, UW, FID, SR, and CT operations primarily in the maritime and riverine environments. These operations include sabotage, demolition, intelligence collection, hydrographic reconnaissance, and training and advising friendly military forces in the conduct of naval and joint special operations.



NAVSPECWARCOM Patrol Coastal Craft

SEAL Platoon Capabilities

SEAL platoons can destroy or sabotage enemy shipping, port and harbor facilities, bridges, railway lines, communications centers and other lines of communication in and around maritime and riverine environments. They can infiltrate and exfiltrate selected personnel by submarine, surface vessel, aircraft or land vehicle. They can conduct reconnaissance and surveillance in multiple environments. They can organize, train and assist US, allied and other friendly military or paramilitary forces in the conduct of special operations.

SEAL Platoon Limitations

SEAL platoons require specialized support for infiltration, exfiltration and resupply. SEALs are restricted in their ability to conduct sustained firepower, mobility, organic combat support and combat service support assets. SEAL platoons are dependent on the theater Navy component or the JSOTF commander for logistic support. SEAL platoons are not equipped for sustained, direct engagements against enemy forces. SEAL platoons carry minimum amounts of equipment, munitions, and light armament consisting primarily of individual weapons.

SEAL Platoon Security

Surprise and freedom of movement are essential to the success of special operations. These vital factors are based on accurate and timely intelligence. Because of the nature of SEAL operations, all aspects of operational security should be diligently observed throughout planning and conduct of operations. Information to friendly forces should be available only on a need-to-know basis. Negotiations with local political factions that are necessary for the performance of a SEAL operation should be carefully planned to preclude compromise.

Mobile Communications Team

The Mobile Communications Team is an operational component of the communications-electronics departments of the Naval Special Warfare Groups ONE and TWO. They are responsible for: (1) Providing operational communications support to SEAL Teams, SEAL Delivery Vehicle Teams, and to Special Boat Squadrons for deployed fleet and joint units; (2) Organizing, training, and integrating new equipment and developing tactics to provide the highest quality Naval Special Warfare communications operations and support; (3) Preparing, implementing, and reviewing communications plans in coordination with higher authority, Naval Special Warfare Command components and other fleet and joint units.

NAVAL SPECIAL WARFARE GROUP ONE

Naval Special Warfare Group ONE (NSWG 1) in Coronado, California, is one of the six major operational components of the Naval Special Warfare Command. It is commanded by a Navy Captain (O-6). NSWG 1 has under its operational and administrative control, SEAL Team ONE, SEAL Team THREE, SEAL Team FIVE, and SEAL Delivery Vehicle Team ONE. Administrative control of NSWU-1 AND NSWU-3 is with Naval Special Warfare Group ONE. The group deploys Naval Special Warfare forces worldwide to meet the training, exercise, contingency, and wartime requirements of the theater Commanders. Naval Special Warfare Group ONE is capable of task-organizing to support worldwide commitments as a deployed Naval Special Warfare Task Group (NSWTG), as they did during Desert Shield/Desert Storm. NSWG1 geographically concentrates on the Pacific and Central Commands areas of responsibility.

SEAL Team ONE

SEAL Team ONE is based in Coronado, CA. Commanded by a Navy Commander (O-5), it has eight operational SEAL platoons and a headquarters element. SEAL Team ONE's geographic area of concentration is Southeast Asia. SEAL Team ONE deploys platoons to Naval Special Warfare Unit ONE in Guam and conducts Deployments for Training (DFTs) throughout the Pacific and Central theaters.

SEAL Team THREE

SEAL Team THREE is based in Coronado, CA. Commanded by a Navy Commander (O-5), it has eight operational platoons and a headquarters element. SEAL Team THREE's geographic area of concentration is Southwest Asia. SEAL Team THREE deploys platoons to Naval Special Warfare Unit ONE in Guam aboard amphibious ships deployed to Seventh, Fifth, and Third Fleets, and conducts DFTs throughout the Pacific and Central Theaters.

SEAL Team FIVE

SEAL Team FIVE is based in Coronado, CA. Commanded by a Navy Commander (O-5), it has eight operational platoons and a headquarters element. SEAL Team FIVE's geographic area of concentration is the Northern Pacific. SEAL Team FIVE deploys platoons to Naval Special Warfare Unit ONE in Guam, aboard amphibious ships deployed to Seventh, Fifth, and Third Fleets, and conducts DFTs throughout the Pacific and Central Theaters.

SEAL Delivery Vehicle Team ONE

SEAL Delivery Vehicle Team ONE (SDVT-1), is based in Pearl Harbor, HI. Commanded by a Navy Commander (O-5), it has three operational SEAL Delivery Vehicle (SDV), Dry Deck Shelter (DDS) Task Units and a headquarters element. Each SDV/DDS Task Unit is designed to operate independently from a host submarine in the conduct of Naval Special Warfare missions. SDV/DDS Task Units normally deploy only aboard host submarines, but may be deployed from shore or surface ships. SDVT-1 conducts operations throughout the Pacific and Central commands geographic areas or responsibility.

Naval Special Warfare Unit ONE

Naval Special Warfare Unit ONE, (NSWU-1), is based in Guam. Commanded by a Navy Commander (O-5), it consists of a headquarters element and has operational control of SEAL platoons and Special Boat Unit Detachments from the Naval Special Warfare Group ONE and from Special Boat Squadron ONE that forward deploy to NSWU-1 on a six month rotational duty. Currently, NSWU-1 maintains operational control of five forward deployed SEAL platoons and two SBU Rigid Hull Inflatable Boat (RIB) Detachments. NSWU-1 is under the administrative command of Naval Special Warfare Group ONE, but operationally reports to Special Operations Command, Pacific and US Navy Seventh Fleet for operational tasking. NSWU-1 provides operational support to forward deployed platoons and conducts theater planning for contingencies and exercises for Naval Special Warfare forces in the Pacific area of operations. NSWU-1 is capable of forming the nucleus of a Naval Special Warfare Task Unit (NSWTU).

Naval Special Warfare Group ONE Detachment Kodiak

Detachment Kodiak is located in Kodiak, Alaska. It is a small training command consisting of a six man training cadre that specializes in training SEAL platoons and Special Boat Unit Detachments in maritime cold-weather operations. Units train in long range maritime navigation, across the beach operations, and other cold weather operations.



SEAL Arctic Training

Naval Special Warfare Unit THREE

Naval Special Warfare Unit THREE (NSWU-3), based in Bahrain and under the administrative control of NSWG-1, is commanded by a NSW Commander (O5). It consists of a small headquarters element which forms the core of a NSWTU when deployed. It plans, coordinates,

and supports the activities of SEAL platoons and SBU detachments deployed to the US Central Command, exclusive of those organic to amphibious ready groups (ARG) and carrier battle groups (CVBG). In view of the maritime character of the area of responsibility and nature of the operations supported, day to day OPCON is exercised by COMNAVCENT. OPCON may be shifted to Special Operations Command, Central (SOCCENT) when required by operational tasking.

NAVAL SPECIAL WARFARE GROUP TWO

Naval Special Warfare Group TWO (NSWG-2), located in Little Creek, VA, is the one of the six major operational components of the Naval Special Warfare Command. NSWG-2 is commanded by a Navy Captain (O-6). NSWG-2 has under its operational and administrative control, SEAL Team TWO, SEAL Team FOUR, SEAL Team EIGHT, SEAL Delivery Vehicle Team TWO, Naval Special Warfare Unit FOUR and Naval Special Warfare Unit TEN. Administrative control of Naval Special Warfare Unit TWO and Naval Special Warfare Unit EIGHT is with Naval Special Warfare Group TWO. The group deploys Naval Special Warfare forces worldwide to meet training, exercise, contingency, and wartime requirements of the theater Commanders. Naval Special Warfare Group TWO is capable of task organizing to support worldwide commitments as a deployed Naval Special Warfare Task Group, NSWTG, as they did during Operation JUST CAUSE. Naval Special Warfare Group TWO geographically concentrates on the Atlantic, Europe and Southern Command areas of responsibility.

SEAL Team TWO

SEAL Team TWO, is based at Little Creek, VA. Commanded by a Navy Commander (O-5), it has eight operational platoons and a headquarters element. SEAL Team TWO's geographic area of concentration is Europe. SEAL Team TWO deploys platoons to Naval Special Warfare Unit TWO in Germany, aboard Amphibious Ships deployed to Second and Sixth Fleets, and conducts deployment for training, (DFTs) throughout the European theater. SEAL Team TWO is the only SEAL team with an arctic warfare capability.

SEAL Team FOUR

SEAL Team FOUR is based at Little Creek, VA. Commanded by a Navy Commander (O-5), it has ten operational platoons and a headquarters element. SEAL Team FOUR's geographic area of concentration is Central and South America. SEAL Team FOUR deploys platoons to Naval Special Warfare Unit EIGHT in Panama, aboard Amphibious Ships deployed to Second Fleet, and in support of the annual UNITAS cruise, and conducts DFTs throughout the Central and South American theater. SEAL Team FOUR is the only SEAL Team with a viable standing language capability, Spanish.

SEAL Team EIGHT

SEAL Team EIGHT is based at Little Creek, VA. Commanded by a Navy Commander (O-5), it has eight operational platoons and a headquarters element. SEAL Team EIGHT's geographic area of concentration is the Caribbean, Africa, and the Mediterranean. SEAL Team Eight deploys platoons with carrier battle groups (CVBGs) and amphibious ships in support of Second, Fifth, and Sixth Fleet commanders, and conducts DFTs throughout the Caribbean, Africa, and the Mediterranean littoral.

Naval Special Warfare Unit TWO

Naval Special Warfare Unit TWO (NSWU-2) is based in Stuttgart, Germany. Commanded by a Navy Commander (O-5), it consists of a headquarters element and has operational SEAL platoons and Special Boat Unit Detachments from the Naval Special Warfare Group TWO and from Special Boat Squadron TWO that forward deploy to NSWU-2 on a six month rotational duty. Currently, NSWU-2 maintains operational control of two forward deployed SEAL platoons and a Special Boat Unit RIB Detachment. NSWU-2 is under the administrative control of Naval Special Warfare Group TWO, but operationally reports to Special Operations Command, Europe for operational tasking. NSWU-2 provides operational support to forward deployed platoons and conducts theater planning for contingencies and exercises for Naval Special Warfare forces in the EUCOM theater of operations. NSWU-2 is capable of forming the nucleus of a Naval Special Warfare Task Unit, NSWTU.

Naval Special Warfare Unit FOUR

Naval Special Warfare Unit FOUR (NSWU-4) is based at Naval Station Roosevelt Roads, Puerto Rico. Commanded by a Navy Lieutenant Commander (O-4), it consists of a headquarters element and an integrated Special Boat Unit Detachment. NSWU-4 is a training command that provides training support to SEAL platoons, SDV Task Units, Special Boat Unit Detachments and other Special Operations Forces conducting training in the Puerto Rico operational areas. NSWU-4 is under the operational and administrative control of Naval Special Warfare Group TWO.

Naval Special Warfare Unit EIGHT

Naval Special Warfare Unit EIGHT (NSWU-8) is based in Rodman, Panama. Commanded by a Navy Commander (O-5), it consists of a headquarters element and has operational SEAL platoons from Naval Special Warfare Group TWO that forward deploy to NSWU-8 on a six month rotational duty. Currently, NSWU-8 maintains operational control of two SEAL platoons and Special Boat Unit TWENTY-SIX. NSWU-8 is under the administrative control of Naval Special Warfare Group TWO, and operational control of Special Operations South and Atlantic Fleet, South. NSWU-8 provides operational support to forward deployed platoons and conducts theater planning for contingencies and exercises for Naval Special Warfare forces in the SOUTHCOM theater of operations. NSWU-8 is capable of forming the nucleus of a Naval Special Warfare Task Unit, NSWTU.

Naval Special Warfare Unit TEN

Naval Special Warfare Unit TEN (NSWU-10) is based at Naval Station Rota, Spain. Commanded by a NSW Commander (O5), it has three operational SDV Task Units and a headquarters element. SDVT-2 conducts operations throughout the US Atlantic, Southern, and European commands. Its mission is to provide tactical type training opportunities for NSW forces deployed aboard Sixth Fleet ships during slack periods while on routine deployments, so NSW forces can maintain perishable skills. NSWU-10 is responsible for all NSW exercises conducted in Spain. NSWU-10 is under the operational and administrative command of Naval Special Warfare Group TWO. NSWU-10 conducts close coordination with Special Operations Command, Europe.

SEAL Delivery Vehicle Team TWO

SEAL Delivery Vehicle Team TWO (SDVT-2) is based at Little Creek, VA. Commanded by a Navy Commander (O-5), it has three operational SDV/DDS (Dry Deck Shelter) Task Units and a headquarters element. SDVT-2 conducts operations throughout the Atlantic and Southern, and European command geographic areas of responsibility. SDVT-2 places special emphasis on providing the Sixth Fleet Commander a SDV/DDS capability.

SPECIAL BOAT SQUADRON ONE

Special Boat Squadron ONE (SBR-1) located in Coronado, CA is one of the six major operational components of Naval Special Warfare Command. It is commanded by a Navy Captain (O-6). Special Boat Squadron ONE has under its operational and administrative control Special Boat Unit ELEVEN, Special Boat Unit TWELVE and four Patrol Coastal Class (PC) ships, USS HURRICANE (PC-3), USS MONSON (PC-4), USS SQUALL (PC-7), and USS ZEPHYR (PC-8). The Squadron deploys PCs and Special Boat Unit, SBU, detachments worldwide to meet training, exercise, contingency, and wartime requirements of theater Commanders. Special Boat Squadron ONE geographically concentrates on the Pacific and Central areas of responsibility.

Special Boat Unit TWELVE

Special Boat Unit TWELVE (SBU-12) is based in Coronado, CA. It is commanded by a Navy Commander (O-5), and consists of a headquarters element and eight Rigid Hull Inflatable, RIB, Detachments. In addition, by the end of FY 98, SBU-12 will have 5 MK V Special Operations Craft, SOC, Detachments. Each Detachment normally consists of two boats with crews. SBU-12, supports open-water special operations missions for West Coast Naval Special Warfare forces and deploys detachments aboard amphibious ships, to Naval Special Warfare Unit ONE, and on DFTs throughout the Pacific and Central areas of operation. SBU-12 is under the operational and administrative control of Special Boat Squadron ONE.

SPECIAL BOAT SQUADRON TWO

Special Boat Squadron TWO (SBR-2) is based in Little Creek, VA and is one of the six major operational components of Naval Special Warfare Command. Special Boat Squadron TWO is commanded by a Navy Captain (O-6). Special Boat Squadron TWO has under its operational and administrative control Special Boat Unit TWENTY, Special Boat Unit TWENTY-TWO, and 9 Patrol Coastal Class, PC, ships. The PCs under Special Boat Squadron TWO are USS

CYCLONE (PC-1), USS TEMPEST (PC-2), USS TYPHOON (PC-5), USS SIROCCO (PC-6), USS CHINOOK (PC-9), USS FIREBOLT (PC-10), USS WHIRLWIND (PC-11), USS THUNDERBOLT (PC-12) and USS SHAMAL (PC-13). SBU-26 reports administratively to Special Boat Squadron TWO. The squadron deploys PCs and SBU detachments worldwide to meet training, exercise, contingency and wartime requirements of theater Commanders. Special Boat Squadron TWO geographically concentrates on the Atlantic, Southern and Europe areas of responsibility.

Special Boat Unit TWENTY

Special Boat Unit TWENTY (SBU-20) is based in Little Creek, VA. It is commanded by a Navy Commander (O-5), and consists of a headquarters element and 13 Rigid Inflatable Boat (RIB), detachments and two MK V Special Operations Craft, SOC, Detachments. By the end of FY98, SBU-20 will have 5 MK V SOC Detachments. Each detachment normally consists of two boats. SBU-20 supports open-water special operations missions for East Coast Naval Special Warfare forces and deploys detachments aboard amphibious ships and to NSWU-2 and NSWU-10. SBU-20 focuses on providing operational support to the European and Atlantic theaters of operations. SBU-20 is under the operational and administrative control of Special Boat Squadron TWO.

Special Boat Unit TWENTY-TWO

Special Boat Unit TWENTY-TWO (SBU-22), is based in New Orleans, LA. It is commanded by a Navy Commander (O-5), and consists of a headquarters element and 2 Patrol Boat Riverine (PBR) detachments, 2 Mini Armored Troop Carrier (MATC) detachments and 2 Patrol Boat Light (PBL) detachment. Each detachment normally consists of two boats with crews. SBU-22 is mainly a reserve organization with over 70% of the command being Naval reservists. SBU-22 focuses on providing riverine support in Southern and European theaters of operations. SBU-22 is under the operational and administrative control of Special Boat Squadron TWO.



Rigid Hull Inflatable Boat on Patrol

Special Boat Unit TWENTY-SIX

Special Boat Unit TWENTY-SIX (SBU-26) is based in Rodman, Panama. It is commanded by a Navy Lieutenant Commander (O-4), and consists of a headquarters element and 10 Patrol Boat Light (PBL) detachments. Each detachment normally consists of two boats with crews. SBU-26 is dedicated to conducting operations in the riverine environment in support of the Southern Commands theater of operations. SBU-26 is

under the operational control of Naval Special Warfare Unit EIGHT and under administrative control of Special Boat Squadron TWO.

US Naval Psychological Operations Forces

The US Navy possesses the capability to produce audiovisual products in the Fleet Audiovisual Command, Pacific; the Fleet Imagery Command, Atlantic; the Fleet Combat Camera Groups; Naval Imaging Command; various film libraries; and limited capability from ships and aircraft of the fleet. A Naval Reserve PSYOP audiovisual unit supports the Atlantic Fleet.

Navy personnel assets have the capability to produce documents, posters, articles, and other material suitable for PSYOP. Administrative capabilities exist ashore and afloat that prepare and produce various quantities of printed materials. Language capabilities exist in naval intelligence and among naval personnel for most European and Asian languages.

The Fleet Tactical Readiness Group (FTRG) provides equipment and technical maintenance support to conduct civil radio broadcasts and broadcast jamming in the amplitude modulation (AM) frequency band. This unit is not trained to produce PSYOP products and must be augmented with PSYOP personnel or linguists when necessary. The unit is capable of being fully operational within 48 hours of receipt of tasking. The unit's equipment consists of a 10.6kw AM band broadcast radio transmitter; a broadcast studio van; antenna tuner; two antennas (a pneumatically raised 100 foot top-loaded antenna mast and a 500 foot wire helium balloon antenna); and a 30 kw generator that provides power to the system.

US Marine Corps (USMC) Psychological Operations Forces

The USMC has the capability to execute observable actions to convey selected impressions to support PSYOP objectives. This support may include aerial and artillery leaflet dissemination, combat camera documentation, and the use of motion picture projection equipment.

NAVAL SPECIAL WARFARE WEAPONS SYSTEMS

Patrol Coastal Class Ship

Naval Special Warfare has taken control of 12 of 13 Patrol Coastal (PC) class ships. The PC class has a primary mission of coastal patrol and interdiction, with a secondary mission of Naval Special Warfare support. Primary employment missions will include forward presence, monitoring and detection operations, escort operations, non-combatant evacuation, and foreign internal defense.



US Navy Patrol Coastal Craft

The PC class operates in low intensity environments. Naval Special Warfare operational missions will include long range SEAL insertion/extractions, tactical swimmer operations, intelligence collection, operational deception, and coastal/riverine support. PCs will normally operate as a two boat detachment. This allows enhanced support and facilitates the assignment of one Mobile Support Team, MST, every two ships.

Design Characteristics:

Length:	170 feet
Beam:	25 feet
Draft:	7.8 feet
Displacement:	328.5 tons (full load)
Fuel Capacity:	18,000 gallons
Propulsion:	4 Paxman diesels (3350 horsepower each)
Generators:	2 Caterpillar (155 kilowatt each)
Steel hull with aluminum superstructure	
Commercial sensors and navigation systems	
Complement:	4 officers, 24 enlisted
Detachment:	Berthing for 9-man SOF/law enforcement detachment

Performance Criteria:

Maximum Speed: 30 plus knots
Cruising Speed: 12 knots
Seaworthiness: Survive through sea state five
Max Range: In excess of 3000 nm (2 engines at 16 knots)

Armament:

MK 38 25mm rapid fire gun
MK 96 25mm rapid fire gun
Stinger Station
4 pintles supporting any combination of: .50 caliber machine guns; M60 machine guns;
MK 19 grenade launchers
Small arms
MK 52 Mod 0 chaff decoy launching system
Pre-planned product improvement: NSW RIB retrieval system

MK V Special Operations Craft

The MK V Special Operations Craft (SOC), is the newest craft in the Naval Special Warfare inventory. The MK V SOC primary mission is a medium range insertion and extraction platform for Special Operations Forces in a low to medium threat environment. The secondary mission is limited Coastal Patrol and Interdiction (CP&I), specifically limited duration patrol and low to medium threat coastal interdiction.

The MK V SOC will normally operate in a two craft detachment with a Mobile Support Team. The Mobile Support Team (MST) provides technical assistance and maintenance support during mission turnaround. The MK V SOC is fundamentally a single sortie system with a 24 hour turnaround time. The typical MK V SOC mission duration is 12 hours. The MK V SOC is fully interoperable with the PC ships and NSW RIBs. As such, all could be employed from a Forward Operating Base (FOB), in a synergistic effect.

A MK V SOC detachment, consisting of two craft and support equipment, will be deployable on two USAF C-5 aircraft into the gaining theater within 48 hours of notification. A detachment is transportable over land on existing roadways. Detachments are not configured nor manned to provide their own security, messing, or berthing for personnel while forward deployed.



MK V SOC

Design Characteristics:

Length:	81 feet 2 inches
Beam:	17 ft 5 3/4 inches
Draft:	5 feet
Displacement:	57 tons (full load)
Fuel Capacity:	2,600 gallons

Propulsion: 2 MTU 12V396 diesels (2285 horsepower each)
2 KaMeWa waterjets
Aluminum hull with five watertight compartments
Radar, full suite communications (HF, UHF, HF, SATCOM), GPS, IFF
Complement: 1 officer, 5 enlisted
Detachment: 16 SOF combat loaded operators with 4 CRRCs

Performance Criteria:

Maximum Speed: 45-48 knots for 250 nautical miles in Sea State 2
Cruising Speed: 25 - 40 knots Sea State 3
Seaworthiness: Survive through sea state five
Max Range: 500 nm (2 engines at 45 knots)

Armament:

Stinger Station
5 pintles supporting any combination of: .50 caliber machine guns; M60 machine guns;
MK 19 grenade launchers
Small arms
Pre-planned product improvement: Mounting stations for GAU-17 Minigun,
MK 95 Twin 50 cal machine gun, MK 38 chain gun

Rolling Stock per two boat detachment:

2 MK V SOC transporters
2 M9161A prime movers
2 M1083 5 ton trucks
4 M1097 HUMMVs with S250 shelters
1 five-ton forklift

River Patrol Boat

The River Patrol Boat (PBR), is designed for high speed riverine patrol operations in contested areas of operations, and insertion/extraction of SEAL Team elements. More than 500 units were built when first introduced in the Vietnam conflict in 1966 although the current inventory is 24 craft. They can be transported in C-5 aircraft on skids.

The PBR is heavily armed and vital crew areas are protected with ceramic armor. The weapons loadout on this craft includes both single and twin .50 caliber machine gun mounts, 40 mm grenade launchers and small arms.



River Patrol Boat (PBR)

The hull is reinforced fiberglass with two Jacuzzi type waterjet pumps for propulsion. The unit can operate in shallow debris filled water. The craft is highly maneuverable and can turn 180 degrees and reverse course within the distance of its own length while operating at full power. Engine noise silencing techniques have been incorporated into the design and improved over the years. The combination of relatively quiet operation

and its surface search radar system make this unit an excellent all-weather picket as well as a shallow water patrol and interdiction craft.

Design Characteristics:

Length:	32 feet
Beam (including guard rails):	11 feet 7 inches
Weight:	8 3/4 tons
Draft:	2 feet
Propulsion:	2 GM 6V53N Diesel Engines (215 horsepower each) 2 Jacuzzi 14YJ water jet pumps
Radar, VHF/UHF Radios	
Complement:	4 crew and 6 passengers
Fiberglass-reinforced hull	

Performance Characteristics:

Speed: 24 Knots
Seaworthiness: Sea State 3
Max Range: 300 nm at full speed

Armament:

Standard:

Twin mount. 50 cal machine gun
.50 cal machine gun, stand mounted
MK19 40 mm grenade launcher

Options:

40mm/.50 cal machine gun, stand mounted
60mm mortar
M60 machine guns

Mini-Armored Troop Carrier

The Mini-Armored Troop Carrier (MATC) is a 36 foot all-aluminum hull craft designed for high-speed patrol, interdiction, and combat assault missions in rivers, harbors, and protected coastal areas. The MATC has a large well area for transporting combat equipped troops, carrying cargo, or for gunnery personnel operating the seven organic weapon stations.



Mini Armored Troop Carrier

The MATC propulsion system is similar to that of the PBR, with an internal jet pump, which moves the water on the same principle as the air breathing jet engine. This type of propulsion is especially appropriate for beaching operations. A hydraulic bow ramp is designed to aid the insertion and extraction of troops and equipment. The craft has a low silhouette which makes it difficult to detect in all speed ranges. The unit is extremely quiet,

particularly at idle speeds. A high resolution radar and multiple communications suite, provides a good all weather surveillance and command and control presence for interdiction and anti-smuggling operations. The overhead canopy can be removed or stowed below. Crew size is normally four but can be modified depending on the mission and mission duration.

Design Characteristics:

Length: 36 feet
 Beam (including guard rails): 12 feet 9 inches
 Draft: 2 feet
 Displacement: 12.5 tons
 Propulsion: 2 GM 8V53N diesel engines (283 horsepower each)
 2 Jacuzzi 20YJ water jet pumps
 Aluminum Hull, flat bottom
 Radar, VHF/UHF Radios
 Complement: 4 crew and 8 passengers

Performance Criteria:

Maximum Speed: 25+ knots
 Seaworthiness: Sea State 3
 Max range: 350 nautical miles

Armament:

7 pintle mounted weapons to include .50 caliber, M-60, MK 19
 60 MM mortar

Light Patrol Boat

The Light Patrol Boat (PBL) is a lightly armed Boston Whaler type craft with no armor. This craft is constructed of fiberglass with reinforced transom and weapons mount areas. It is powered by dual outboard motors and is highly maneuverable. It is useful in interdicting a lightly armed adversary but should not be used to engage a heavily armed or well organized enemy. It functions effectively in policing actions, harbor control, diving and surveillance operations, riverine warfare, drug interdiction, and other offensive or defensive purposes.



Light Patrol Boat

The weapon mountings can include .50 caliber heavy machine guns or 7.62mm machine guns mounted on 180-degree mounts, providing an effective weapon employment in any direction. Due to its unique hull design, the PBL is excellent for the riverine environment, allowing it to operate in virtually any water depth. Its two low-profile engines are capable of providing eight hours of

continuous operation at a fast cruise speed of 25-plus knots. It displaces 6,500 lb. fully loaded and is transportable via its own trailer, helicopter sling, or C-130 aircraft. Normal crew size is three personnel.

Design Characteristics:

Length: 25 feet
 Max beam: 8 feet 7 inches
 Draft: 18 inches
 Propulsion: Twin 155-HP outboards
 Fiberglass hull
 VHF, UHF, and SATCOM Radios
 Complement: 3 Crew and 8 passengers

Performance Criteria:

Speed: 30+ knots
 Range: 150 nautical miles
 Seaworthiness: Sea State 2

Armament:

3 weapons stations, one forward and two aft/ Combination of .50 cal, or M-60

Rigid Inflatable Boat

The Rigid Inflatable Boat (RIB) is a high speed, high buoyancy, extreme weather craft with the primary mission of insertion/extraction of SEAL tactical elements from enemy occupied beaches.

The RIB is constructed of glass reinforced plastic with an inflatable tube gunwale made of a new hypalon neoprene/nylon reinforced fabric. There are two types of RIBs currently in the inventory, a 24-foot RIB and a 30-foot RIB. The RIB has demonstrated the ability to operate in light-loaded condition in sea state six and winds of 45 knots. For other than heavy weather coxswain training, operations are limited to sea state five and winds of 34 knots or less.



Rigid Inflatable Boat

The 24-foot RIB carries a crew of three and a SEAL element. A 30 Foot RIB, NSW RIB*, 10 Meter RIB carries a crew of three and allows for a SEAL squad delivery capability.

Design Characteristics:

	<u>24 foot RIB</u>	<u>10 meter RIB</u>
Length:	24 feet	30 feet
Beam:	9 feet	11 feet
Draft:	2 feet	3 feet
Weight:	9,300 lb.	14,700 lb.
Propulsion:	Single Volvo Penta	Two Iveco Diesels with waterjets
Complement:	3 crew/4 passengers	3 crew/8 passengers
	Radar, HF, UHF, VHF Radios	Radar, HF, UHF, VHF, SATCOM Radios

Performance Criteria:

Speed:	25+ knots	35+ knots
Range:	170 nautical miles	200 nautical miles
Seaworthiness:	Sea State 5	Sea State 5

Armament:

Forward and After Mounts Capable of M-60	Forward and After Mounts Capable of M-60, M-2, or MK 19
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* As the NSW-RIB becomes operational it will replace the 24 foot and 30 meter RIBs

Combat Rubber Raiding Craft

The Combat Rubber Raiding Craft (CRRC) is used for clandestine surface insertion and extraction of lightly armed SOF forces. They are employed to land and recover SOF forces from over-the-horizon. The CRRC is capable of surf passages. The CRRC may be launched by air (airdrop/helo-cast), or by craft (LCU, LCM). It may also be deck-launched or locked-out from submarines. It has a low visual electronic signature, and is capable of being cached by its crew once ashore. It uses one 35-55 horsepower engine.



Combat Rubber Raiding Craft

Design Characteristics:

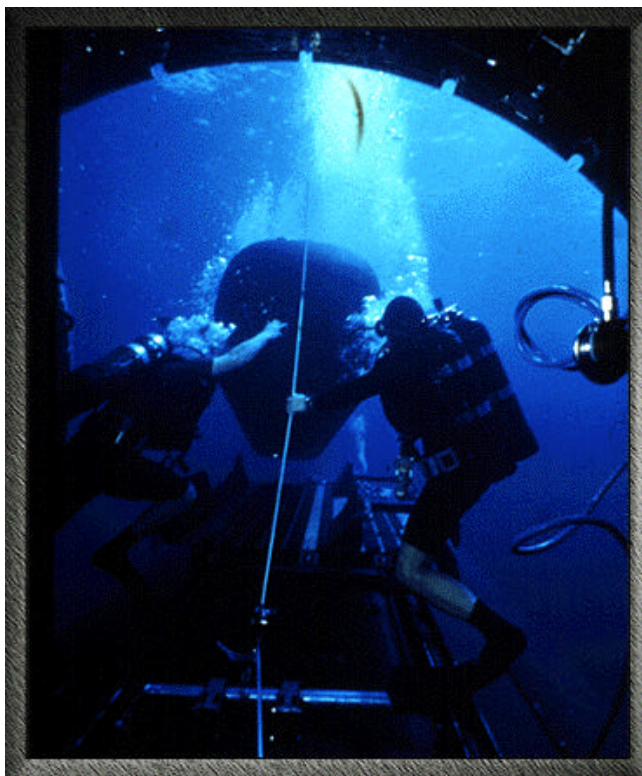
Length:	15 feet 5 inches
Beam:	6 feet 3 inches
Draft:	2 feet
Weight:	265 lb. without motor or fuel
Speed:	18 knots, no load
Range:	Dependent on fuel carried
Complement:	8 max

SEAL Delivery Vehicle MK VIII

The SEAL Delivery Vehicle (SDV) MK VIII is a "wet" submersible, designed to carry combat swimmers and their cargo in fully flooded compartments. Submerged, operators and passengers are sustained by the individually worn underwater breathing apparatus (UBA). Operational scenarios for the vehicle include underwater mapping and terrain exploration, location and recovery of lost or downed objects, reconnaissance missions, and limited direct action missions.

The vehicle is propelled by an all-electric propulsion subsystem powered by rechargeable silver-zinc batteries. Buoyancy and pitch attitude are controlled by a ballast and trim system; control in both the horizontal and vertical planes is provided through a manual control stick to the rudder, elevator, and bow planes. A computerized Doppler navigation sonar displays speed, distance, heading, altitude, and other piloting functions. Instruments and other electronics units are housed in dry, watertight canisters. The special modular construction provides easy removal for maintenance.

Major subsystems are Hull, Propulsion, Ballast/Trim, Control, Auxiliary Life Support, Navigation, Communications and Docking Sonar.



SDV Being Returned to the Dry Deck Shelter.

Dry Deck Shelter

The Dry Deck Shelter (DDS) allows for the launch and recovery of an SDV or combat rubber raiding craft (CRRC) with personnel from a submerged submarine. It consists of three modules constructed as one integral unit. The first module is a hangar in which an SDV or CRRC is stowed. The second module is a transfer trunk to allow passage between the modules and the submarine. The third module is a hyperbaric recompression chamber. The DDS provides a dry working environment for mission preparations. In a typical operation the DDS hangar module will be flooded, pressurized to the surrounding sea pressure, and a large door is opened to allow for launch and recovery of the vehicle. A DDS can be transported by USAF C-5/C-17 aircraft, rail, highway, or sealift. The DDS is 40 feet long and weighs 65,000 lb.



Dry Deck Shelter on a Submarine Deck

Current submarines capable of single DDS employment:

USS L. MENDEL RIVERS

USS BATES

Current submarines capable of dual DDS employment:

USS KAMEHAMEH

USS POLK

Design Characteristics:

Length:	39 feet
Width:	10 feet
Weight:	65,000 lb.
Volume:	3,705 cubic feet

Desert Patrol Vehicle

The DPV is correctly named the Desert Patrol/Light Strike Vehicle. It is a modified Chenowith off-road, three-man, 2x4 racing vehicle. The DPV was designed to operate anywhere a four-wheel drive vehicle can, with additional speed and maneuverability.



Desert Patrol Vehicle

The DPV can perform numerous combat roles including, but not limited to: special operations delivery vehicle, command and control vehicle, weapons platform, rear area combat operation vehicle, reconnaissance vehicle, forward observation/lasing team, military police vehicle, and artillery forward observer vehicle. The weapon systems used with the DPVs are: Mark 19 40mm Grenade Machine Gun, M2.50 Cal Machine Gun, M60 7.62 Machine Gun, AT-4 Missile, Low Recoil 30mm Cannon, and TOW Missile Launcher.

Vehicle Specifications:

Prime Contractor:	Chenowith
Acceleration:	0-30 mph in 4 sec.
Powerplant:	2000cc gas engine
Speed (max):	60+ mph
Payload:	1500 lb.
Range:	200-plus miles

Dimensions:

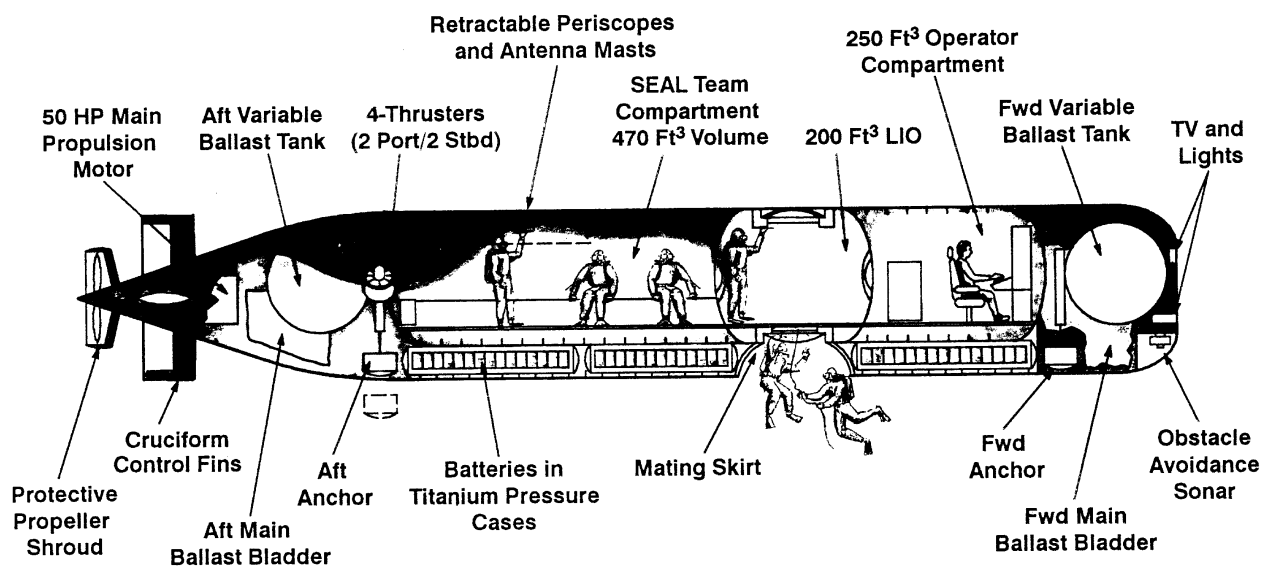
Length:	161 inches
Height:	79 inches
Width:	83 inches
Gross Vehicle Weight:	2700 lb.
Max Grade:	75%
Max Side Slope:	50%
Ground Clearance:	16 inches

Advanced SEAL Delivery System

The Advanced SEAL Delivery System (ASDS) is projected to be in the Naval Special Warfare inventory by FY99. The ASDS is a dry, 1 ATM, mini-submersible that can transport a SEAL squad from a host platform, either surface ship or submarine, to an objective area. The ASDS has a lock-out chamber that is controlled by operators for lock-out from an anchored position. The ASDS will anchor above the bottom between 2-190 feet. The ASDS will be transportable by land, sea or C-5/17 aircraft.

Design Characteristics:

Length: 65 feet
 Beam: 6.75 feet
 Height: 8.25 feet
 Displacement: 55 tons
 Propulsion: 67hp electric motor (Ag-Zn Battery)



Advanced SEAL Delivery System (ASDS)

CHAPTER 5
US AIR FORCE
SPECIAL OPERATIONS FORCES



CHAPTER 5

US AIR FORCE SPECIAL OPERATIONS FORCES

AIR FORCE SPECIAL OPERATIONS COMMAND (AFSOC)

All USAF special operations are under the command of AFSOC (see Figure 5-1). AFSOC is an Air Force major command and constitutes the Air Force component of the unified USSOCOM. AFSOC is organized into one active component Special Operations Wing, two active Special Operations Groups, one active Special Tactics Group, and two reserve Special Operations Wings. AFSOC forces are apportioned and assigned by the Joint Chiefs of Staff (JCS) to USSOCOM and theater Commanders in Chief (CINC). AFSOC has OPCON of CONUS-based forces while theater SOCs exercise OPCON of assigned or OCONUS assets. Only USCINCPAC and USCINCEUR have theater assigned AFSOC forces.

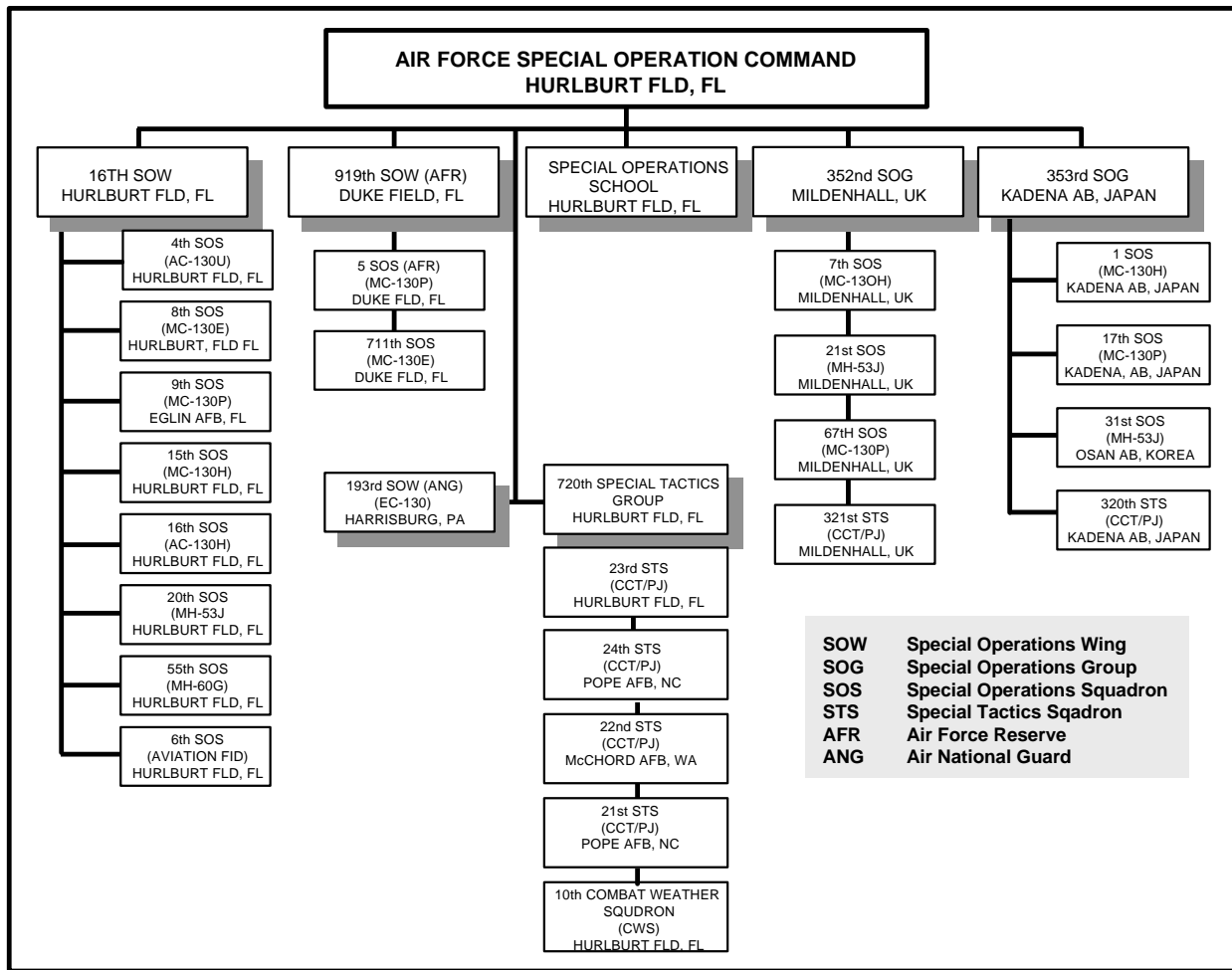


Figure 5-1. AFSOC Organization

Air Force SOF consists of uniquely equipped fixed and rotary wing aircraft operated by highly trained aircrews whose missions include insertion, extraction, resupply, aerial fire support, refueling, combat search and rescue, and PSYOP. Weapons systems operated by AFSOC include:

- MC-130E Combat Talon I
- MC-130H Combat Talon II
- MC-130P Combat Shadow
- AC-130H Spectre Gunship
- AC-130U Spooky II Gunship
- MH-53J Pave Low III
- MH-60G Pave Hawk
- EC-130E Commando Solo

The Special Tactics Group is comprised of Air Force Combat Control, Pararescue and Combat Weather personnel capable of providing terminal guidance for weapons, control of assault zone aircraft, fire support, medical support, and weather support. They also operate expeditionary airfields, conduct classified missions, and support combat rescue missions.

AFSOC Mission

AFSOC is America's specialized air power. It is a step ahead in a changing world, delivering special operations combat power anytime, anywhere. The command is committed to continual improvement to provide Air Force special operations forces for worldwide deployment and assignment to regional unified commands, conducting the full spectrum of Special Operations principal missions and collateral activities.



16TH SPECIAL OPERATIONS WING (SOW)

The 16th SOW is located at Hurlburt Field, Florida and is the oldest and most seasoned unit in AFSOC.

Mission

The wing's mission is to organize, train, and equip Air Force special operations forces for global employment. The 16th SOW focuses on unconventional warfare, including counterinsurgency and psychological operations during operations other than war.

Organization

The 16th SOW is the largest Air Force unit under the Air Force Special Operations Command, the Air Force component of the US Special Operations Command. The 16th SOW deploys with specially trained and equipped forces from each service, working as a team to support national security objectives. The 16th SOW manages a fleet of more than 90 aircraft with a military and civilian work force of nearly 7,000 people. It includes the 6th Special Operations Squadron (SOS), the 4th SOS, the 8th SOS, the 9th SOS, the 15th SOS, the 16th SOS, the 20th SOS and the 55th SOS.

- The 6th Special Operations Squadron is the wing's aviation foreign internal defense (FID) unit. Its members provide US military expertise to other governments in support of their internal defense and development efforts (IDAD).
- The 8th SOS and 15th SOS employ the MC-130E Combat Talon I and MC-130H Combat Talon II aircraft, respectively, supporting unconventional warfare missions and special operations forces. The MC-130 aircrews work closely with Army and Navy Special Operations Forces. Modifications to the MC-130 allow aircrews to perform clandestine missions minimizing the chances of being detected by hostile radar systems. Both units' primary missions are day and night, adverse weather, infiltration, exfiltration, and resupply of special operations forces in hostile or denied territory. In addition, the MC-130E Combat Talon I is capable of clandestine penetration of hostile or denied territory to provide aerial refueling of special operations helicopters.
- The 9th SOS, at nearby Eglin AFB, flies the MC-130P Combat Shadow tanker for worldwide clandestine aerial refueling of special operations helicopters. It has the additional capability of infiltration, exfiltration, and resupply of special operations forces by airdrop or airland tactics.
- The 4th SOS and 16th SOS fly the AC-130U and AC-130H Spectre gunships, respectively. Unique equipment on these modified C-130s enables crews to provide highly accurate firepower in support of both conventional and unconventional forces, day or night. Primary missions include close air support, armed reconnaissance, and air interdiction. Other missions include perimeter defense, forward air control, night search and rescue, surveillance, and airborne command and control.
- The 20th SOS employs the MH-53J Pave Low III helicopter. Its specialized mission consists of day or night, all-weather, low-level penetration of denied territory to provide infiltration, exfiltration, resupply, or fire support for elite air, ground, and naval forces. The unique capabilities of the MH-53J permit operations from unprepared landing zones.
- The 55th SOS flies the MH-60G Pave Hawk helicopter. Its mission is to provide a rapidly deployable, worldwide, multimission and combat rescue capability for wartime special operations and peacetime contingency tasking. It is used to infiltrate, resupply, and exfiltrate US and allied special operations forces during long-range, low-level penetrations of hostile or denied territory at night.



352ND SPECIAL OPERATIONS GROUP (SOG)

The 352nd SOG at RAF Mildenhall, United Kingdom, is the designated Air Force component for Special Operations Command Europe. Its squadrons are the 7th SOS, which flies the MC-130H Combat Talon II; the 21st SOS, equipped with the MH-53J Pave Low III; the 67th SOS, with the MC-130P Combat Shadow; and the 321st Special Tactics Squadron.

Mission

The mission of the 352nd SOG is to act as the focal point for all US Air Force special operations activities throughout the European and Central Commands theaters of operation. The group is prepared to conduct a variety of high priority, low-visibility missions supporting US and allied special operations forces throughout the European theater during peacetime, joint operations exercises and combat operations. It develops and implements peacetime and wartime contingency plans to effectively use fixed wing, helicopter and personnel assets to conduct infiltration, exfiltration and resupply of US and allied special operations forces. AFSOC forces provide precise, reliable and timely support to special operations worldwide.

Organization

The 352nd SOG is the Air Force component for Special Operations Command Europe, a sub-unified command of the US European Command. The 352nd SOG has three flying squadrons, a maintenance and tactical communications squadron and a special tactics squadron. The organizations are:

- The 7th SOS - MC-130H Combat Talon II. Mission is identical to that of the 15th SOS.
- The 21st SOS - MH-53J Pave Low III helicopter. Mission is identical to that of the 20th SOS.
- The 67th SOS - MC-130P. Mission is identical to that of the 9th SOS.
- The 352nd Maintenance Squadron is responsible for maintenance of assigned fixed wing aircraft and helicopters.
- The 321st Special Tactics Squadron pararescuemen and combat controllers provide for the establishment of drop zones, landing zones, air traffic control, combat medical care and evacuation and combat search and rescue for fixed and rotary wing assets. In addition combat controllers trained in SOTAC conduct terminal guidance of fires delivered by fixed and rotary wing aircraft. Also, the 321st has combat weathermen assigned to provide weather support for Air Force and Army special operations.

NOTE

All 352nd assigned units are based at RAF Mildenhall, England.



353RD SPECIAL OPERATIONS GROUP (SOG)

The 353rd SOG, with headquarters at Kadena Air Base, Japan, is the Air Force component for Special Operations Command Pacific. The 353rd SOG is composed of three flying squadrons and the 320th STS. The 320th and two of the flying squadrons are located at Kadena Air Base: the 1st SOS which flies the MC-130H Combat Talon II, and the 17th SOS, which flies the MC-130P Combat Shadow. The third flying squadron is located at Osan Air Base, Korea; the 31st SOS which flies the MH-53J Pave Low III helicopter.

Mission

The group's mission is to act as the focal point for all US Air Force special operations activities throughout the Pacific. The group is prepared to conduct a variety of high-priority, low-visibility air support missions for joint and allied special operations forces in the region. It maintains a worldwide mobility commitment, participates in theater exercises, and supports humanitarian assistance and disaster relief operations. The group develops wartime and contingency plans to effectively use the full range of helicopter and fixed wing capabilities, to include infiltration, exfiltration and resupply of US and allied special operations forces. The primary peacetime responsibility of the 353rd SOG is to oversee the training and maintenance of its assigned units. The group ensures the combat readiness of these units through comprehensive involvement in numerous theater and joint chiefs of staff-directed military exercises and training activities throughout the Pacific.

Organization

The 353rd SOG comprises the US Air Force's special operations air arm in the US Pacific Command. The commander is designated Commander, Air Force Special Operations Command, Pacific, a sub-unified command to the Special Operations Command, Pacific. The 353rd SOG has three flying squadrons, a maintenance and tactical communications squadron and special tactics squadrons. These organizations are:

- The 1st SOS - MC-130H Combat Talon II, Kadena AB, Japan. Mission is identical to that of the 15th SOS.
- The 17th SOS - MC-130P Combat Shadow, Kadena AB, Japan. Mission is identical to that of the 9th SOS.
- The 31st SOS, Osan Air Base, Korea, MH-53J Pave Low III. Mission is identical to that of the 20th SOS.
- The 320th Special Tactics Squadron pararescuemen and combat controllers provide for the establishment of drop zones, landing zones, air traffic control, combat medical care and evacuation, and combat search and rescue for fixed and rotary wing assets. In addition combat controllers trained in SOTAC conduct terminal guidance of fires delivered by fixed and rotary wing aircraft. Also, the 320th has combat weathermen assigned to provide weather support for Air Force and Army special operations.



720TH SPECIAL TACTICS GROUP (STG)

The 720th STG, with headquarters at Hurlburt Field, FL, has special operations combat controllers, pararescuemen, and combat weathermen who work jointly in Special Tactics Teams (STT). There are six Special Tactics Squadrons (STS) and one Combat Weather Squadron. The 320th STS at Kadena AB, Japan and the 320th STS at RAF Mildenhall, England are assigned to and under the operational control of the 353rd and the 352nd Special Operations Groups respectively. The 720th also includes the 10th Combat Weather Squadron with headquarters at Hurlburt Fld, FL, and detachments co-located with US Army Special Operations Command units.

AIR RESERVE and AIR NATIONAL GUARD COMPONENTS

AFSOC gains three Air Reserve Component units when the organizations are mobilized. One is the 919th Special Operations Wing (AFRES) at Duke Field, FL. The 711th SOS flies the MC-130E Combat Talon I, while the 5th SOS flies the MC-130P Combat Shadow. The second is the 193rd Special Operations Group (ANG) at Harrisburg International Airport, PA., which flies the EC-130E Commando Solo. The third component unit is the 123rd Special Tactics Flight (ANG) at Standiford Field, KY.



The 919th Special Operations Wing (AFRES)

The 919th SOW at Duke Field, Fla., is the only Air Force Reserve special operations wing. When mobilized, it reports to Air Force Special Operations Command. The 919th SOW trains Air Force reservists in MC-130E Combat Talon I and MC-130P Combat Shadow aircraft operations, maintenance and support functions to accomplish special operations. The 919th reports to the Air Force Reserve's Tenth Air Force at Bergstrom AFB, TX. The 919th SOW has more than 1,400 reservists and full-time civilian employees assigned. Subordinate units of the 919th are:

- The 711th SOS transitioned from the AC-130A Spectre gunship to the MC-130E Combat Talon I beginning in September 1995. The new mission calls on the squadron to perform specialized day or night low-level delivery of troops or cargo into denied or hostile areas.
- The 5th SOS, which activated in December 1994, flies the MC-130P Combat Shadow tanker. It flies clandestine missions into sensitive territory to provide air refueling for special operations aircraft. A secondary wartime mission for the Combat Shadow includes airdrop of small bundles and special operations teams.



193rd Special Operations Group (ANG)

The 193rd SOG, Pennsylvania Air National Guard, Harrisburg International Airport, Pa., is the Air Force's sole asset for providing airborne radio and television broadcast missions. It is the only ANG unit assigned to Air Force Special Operations Command. The Guard unit falls under AFSOC when mobilized for wartime action, humanitarian efforts or contingencies. The 193rd provides an airborne platform for virtually any contingency, including state or national disasters or other emergencies, on a moment's notice, anywhere in the world. The 193rd Special Operations Group performs this unique mission with six specially configured EC-130E Commando Solo aircraft. A secondary mission assigned to the 193rd is providing airlift for Air Force Intelligence Agency missions with four modified EC-130Es.

Air Force Special Operations Forces (AFSOF) Logistics

AFSOF logistics support is focused on keeping the aircraft flying, just as in the conventional Air Force. Logistics and maintenance emphasis is placed on the cycle of launch, recovery, service, rapid repair, and re-launch. The cycle may be compressed into relatively short time periods, 12 hours or less. This places a significant burden on the support infrastructure, given the level of sophistication of the avionics and the requirement to operate from austere locations.

The parent wing, group and/or squadron are responsible for determining equipment, spares, and personnel requirements. This determination will be based on the length of the deployment and amount of logistic support available at the deployed location. Once deployed, the AFSOC logistics officer will coordinate and manage logistic support, vehicle requirements, POL, billeting, messing, and establish connectivity with the Theater and CONUS logistic support systems.

If time permits prior to deployment, the wing or group logistic planning cell will develop a plan to support deployed flying operations and concomitant logistics objectives. Short term employment will normally be supported by drawing from readiness spares packages. Longer term employments will be supported by established supply lines.

MC-130E/H COMBAT TALON

These aircraft are equipped with in-flight refueling equipment, terrain-following, terrain-avoidance radar, an inertial and GPS navigation system, and a high-speed aerial delivery system. Some MC-130Es are also equipped with the surface-to-air Fulton recovery and helicopter air refueling systems.



MC-130H Combat Talon II

Mission

The mission of the MC-130E Combat Talon I and MC-130H Combat Talon II is to provide global, day, night, and adverse weather capability to airdrop and airland personnel and equipment in support of US and allied special operations forces. The MC-130 conducts infiltration, exfiltration, resupply, psychological operations, and aerial reconnaissance into hostile or denied territory using airland and/or airdrop. Both Combat Talons are capable of inflight refueling, giving them an extended range limited only by crew endurance and availability of tanker support. The MC-130E Combat Talon I is capable of air refueling helicopters in support of extended helicopter operations. MC-130 missions may be accomplished either single-ship or in concert with other special operations assets in varying multi-aircraft scenarios. Combat Talons are able to airland/airdrop personnel/ equipment on austere, marked and unmarked LZ/DZs, day or night. MC-130 missions may require overt, clandestine or low visibility operations.

Equipment

The special navigation and aerial delivery systems are used to locate small drop zones and deliver people or equipment with greater accuracy and at higher airspeeds than possible with a standard C-130E/H aircraft. The following equipment has been installed on the standard C-130E/H aircraft to comprise the major components of the MC-130 aircraft configuration:

- Terrain-Following/Terrain-Avoidance Radar (TF/TA)
- Precision Ground Mapping Radar (PGM)
- Precision Navigation System (INS, Doppler and GPS)
- Automatic Computed Air Release Point System (AUTOCARP)
- Electronic Countermeasures (ECM)
- Infrared Countermeasures (IRCM)
- High Speed Low-Level Aerial Delivery System (HSLADS)
- Container Release System (CRS)

- Ground-to-Air Responder/Interrogator (GAR/I)/MC-130E
- PPN-19 Beacon/MC-130H
- Inflight refueling, receiver operations
- Secure voice HF, UHF, VHF-FM and SATCOM radios
- Forward Looking Infrared (FLIR)
- Helicopter refueling operations (MC-130E aircraft only)
- Internal fuel tanks (Benson tanks)

General Planning Factors



MC-130E Combat Talon 1

- MC-130 missions are normally flown at night using a high-low-high altitude profile. The high altitude portion is generally flown prior to penetrating and after exiting the target area. This portion of the flight will be flown at an average ground speed of 260 knots and at an altitude which minimizes fuel consumption and enemy detection. The aircraft will descend to low-level, terrain-following altitudes to penetrate hostile territory. Mission success may require the flight to be conducted at the lowest possible altitude consistent with flying safety, and at a ground speed between 220 and 260 knots. Night vision goggles (NVGs) may be used for night operations.
- Aircraft range depends upon several factors, including configuration, payload, length of time spent low-level, enroute winds, and weather. For planning purposes, range (without refueling, 2 hours low-level) is 2800nm. Range of the aircraft with inflight refueling is limited only by crew limitations and availability of tanker support. Load capabilities are dependent on aircraft configuration, fuel load, and operating altitude.
- Mission duration will depend on aircraft basing location, aircraft configuration, crew composition, target location, availability of tanker support, and routing required for successful mission accomplishment.

- Crew duty day varies for basic crews and augmented crews. Crew compositions are as follows:

Table 5-1. MC-130 Aircrew Composition

BASIC	AUGMENTED
1 Aircraft Commander	2 Aircraft Commanders
1 Co-Pilot	1 Co-Pilot
2 Navigators (1 MC-130H)	3 Navigators (2 MC-130H)
1 Flight Engineer	1 Flight Engineer
1 Radio Operator (None MC-130H)	2 Radio Operators (None MC-130H)
2 Loadmasters	2 Loadmasters

NOTE 1: Crew duty day for a basic crew is 16 hours, providing no tactical events are accomplished after 12 hours and no air refueling is accomplished after 14 hours.

NOTE 2: Crew duty day for an augmented crew is 20 hours, providing no tactical events are accomplished after 16 hours and no air refueling is accomplished after 18 hours.

- The Combat Talon is not a rapid response force. Missions deep into heavily defended enemy territory require extensive preflight planning. Therefore, exercise contingency operations require at least 72 hours prior notification to mission execution.
- MC-130 aircrews accomplish drops on drop zones with no markings or communications. If commanders agree to use marked drop zones, reception committee personnel must fully coordinate with the aircrew on type markings to be used, configuration of the drop zone, method of authentication and release point determination. The most frequent cause of mission abort is lack of coordination or confusion as to correct marking procedures. Placement and markings types are outlined in AFI 13-217.
- Not all aircrew members are qualified in all employment events. Also, the aircraft can be configured for several different employment events or combinations of events. Therefore, the employment scenario must be known prior to deployment to determine crew and aircraft mission configuration/equipment requirements.
- Terrain-following will be degraded during moderate to heavy showers/thunderstorms.
- Accuracy of airdrops accomplished using onboard navigational equipment (AUTOCARP) is degraded by inaccuracies in DZ coordinates, lack of radar update targets, and a non-operational INS.
- Employment/Navigation and Drop Capabilities. Navigation to the computed air release point (CARP) for airdrops is accomplished by one of the following procedures:

Table 5-2. MC-130 Drop Capabilities

METHOD	PROCEDURE
Manual CARP	Navigator manually computes release point using parachute ballistic data and winds, then visually directs the pilot to the point. Drop Zone (DZ) point of impact or the release point must be marked.
AUTOCARP	Mission computer calculates the release point and provides steering direction to pilot through the flight director system. At the release point, the computer automatically releases the load. Accuracy of the drop is improved if a radar target is located within 5NM of the DZ, or if a GAR/I beacon is positioned on the point of impact (or other pre-coordinated offset position). Since the GAR/I transmits and receives line-of-sight, an unobstructed beacon alignment is imperative. The GAR/I should be turned on 10 minutes prior to scheduled target time.
Ground-Marked Release System	Ground forces compute the release point and provide a ground marker. The release point will be over the ground marker or offset 50 meters to the right for an "inverted L" (other letters may be used if pre-coordinated).
Area DZ	Prearranged flight track over a series of acceptable drop zones (1/2NM either side of track) established in a line of flight between two points no more than 15 miles apart. The ground party is free to receive the drop anywhere along the flight path. Use of the GAR/I and the AUTOCARP is the preferred method of navigation to the release point since it permits early DZ recognition and course adjustments by the aircrew.
Regular DZ	The location, size, and marking are determined prior to the mission.
Blind DZ	Airdrop on unmarked drop zones using AUTOCARP procedures.

MC-130E/H Employment Methods

Table 5-3. MC-130E/H Employment Methods

METHOD	TYPE	COMMENTS
Infiltration and Exfiltration	Static line low altitude airdrops	Flown at 130 knots at 800 ft (min) AGL. Static line drops can also be accomplished in combination with CRS. For combination drops, troops exit from the ramp immediately after ejection of equipment from the ramp.
	High Altitude Low Opening (HALO)/ High Altitude High Opening (HAHO)	Made above 3000 ft. The navigator determines the High Altitude Release Point (HARP). HAHO airdrops are normally made above 10,000 ft AGL, but with no freefall, in order to travel long distances. Both are flown at 130 knots indicated airspeed (KIAS).
	Airland Infiltration/Exfiltration	For training operations, LZ should be hard-surfaced. Extreme caution must be used in coordinating these events at non-active duty military installations. Minimum runway length is takeoff/landing roll plus 500 ft (approx. 3000 ft). Minimum runway width is 60 ft. NVG operations require a runway at least 4000ft by 75 ft. Permission must be received from the airport manager and weight bearing capacity must be adequate. Compatible fire fighting equipment must be immediately available if multiple landings are planned. See AFI 13-217 and AFSOCI 11-202 for training and contingency runway length.

Table 5-3. MC-130E/H Employment Methods (continued)

METHOD	TYPE	COMMENTS
	Kit Drops	Used to deploy the Fulton kit. Drop airspeed may be as high as 250 knots if high-speed rigging procedures are used. Otherwise, the drop is accomplished at 130 knots. Drop altitudes are 200 ft AGL (min) overland and 200ft AGL (min)/300ft AGL (max) over water. Normal delivery is at 250 ft AGL using the terrain-following equipment. No wind limitations apply to this drop.
	Combat Rubber Raiding Craft (CRRC)	Airdropped using low-level procedures (800 ft AGL min). Nineteen parachutists can be airdropped in conjunction with one CRRC or 18 parachutists with two CRRCs. (See Note)

NOTE

3 to 4 CRRCs may be airdropped on a single pass when stacked and rigged for airdrop IAW Army FM 10-542/Air Force TO 13C7-51-21.

Resupply	High Speed Low Level Delivery System (HSSLADS)	Primary method of low-level (250ft AGL min) resupply since it minimizes risks and avoids compromise of the DZ. Airdrop is accomplished at a max airspeed of 250 kts. AUTOCARP or special sight procedures (marked point of impact) will be used to determine release point. High speed containers must weigh between 250-600 lbs each. Four containers may be dropped on one pass, providing the total weight does not exceed 2200 lbs.
	Heavy Equipment Platform Airdrop	Primary method of delivering heavy weight supplies via airdrop (i.e., ammo, large amounts of fuel). It is a low level (800ft AGL) low speed (130 kts), item extraction type drop of platforms assembled in lengths of 8 to 32 feet in increments of 4 ft. Combination airdrops may be accomplished utilizing the aircraft ramp after the load exits. A maximum of 20 personnel may exit when using parachutes rigged with static lines. A maximum weight of 42,000 lbs may be airdropped on a single pass.
	Container Release System (CRS)	Used for low-level (min 500 ft AGL), low speed (130 knots) gravity drops. Employed to airdrop "A" series containers. A total weight not to exceed 6,667 lbs may be dropped on a single pass. Combination drops may be accomplished when dropping CRS. Parachutists exit the aircraft from the ramp after the load exits.
	Container Delivery System (CDS)	The container delivery system (CDS) is designed to deliver up to 16 "A" series cargo containers by gravity extraction on a single pass. A maximum weight of 37,248 lbs may be dropped on a single pass. Combination airdrops may be accomplished when airdropping using the CDS method. A total of 20 paratroopers may be dropped on a single pass.
	Door Bundles	A door bundle is a container weighing less than 500 lbs and released from the paratroop door. Dimensions must be 48l n x 30 in x 66 in or less.
Psychological Operations		Psychological operations are conducted through leaflet drops. Psychological warfare units will supply necessary information, leaflets, and other materials as required.
Aerial Reconnaissance		Some aircrews are trained to conduct visual reconnaissance. A portable camera system may be mounted on the MC-130 to provide a limited daylight photo capability for use in a low threat environment. A portable videotape recorder can also record FLIR images providing a limited night photo capability.

Load Capabilities For The MC-130E Talon I

The following tables illustrate maximum aircraft load capabilities for the MC-130E Combat Talon I aircraft. Load capabilities will be reduced if fending lines are installed or operating in high terrain and/or temperature environments.

Table 5-4. MC-130E Load Capabilities for Ground Troop Movement and Personnel Airdrop

LOAD	INTERNAL EQUIPMENT REMOVED	FULTON
Ground troops (excluding aircrew)	59	
Paratroops (including safeties and jumpmaster)	38	

Table 5-5. MC-130E Load Capabilities for Equipment Airdrop

LOAD	NUMBER THAT CAN BE DROPPED ON A PASS	TOTAL LOAD
High Speed Low Level Aerial Delivery System (HSSLADS) bundles	4	Restricted to space available & 2200 lbs.
Container Release System (CRS) bundles. (See Note 1)	Depends on type of container used.	Depends on type of container used. Total weight not to exceed 6667 lbs.
Door bundles (max size and weight)	Size: 48in x 30in x 66in wt: 500lbs	Dependent on mission requirements.
Combat Rubber Raiding Craft (CRRC) (See Note 2)	4 (See Note 2)	4
Heavy Equipment Platforms	2	2
Container Delivery System (CDS)	12	12

NOTE 1: The CRS bundles can be airdropped from the aircraft ramp. Number, size and weight of bundles is a limiting factor. Max weight for the MC-130 ramp is 5000 lbs including the weight of the dual rails (336 lbs).

NOTE 2: 3 to 4 CRRCs may be airdropped on a single pass when stacked and rigged for airdrop IAW Army FM 10-542/Air Force TO 13C7-51-21

Table 5-6. MC-130E Load Capabilities for Equipment and Personnel (combination airdrop)

LOAD	NUMBER THAT CAN BE DROPPED ON A PASS OVER DROP ZONE (DZ)	TOTAL LOAD
CRS bundles/combat equipped paratroops	Depends on type "A" containers/20 paratroops. Total static lines not to exceed 20 on anchor cable.	Depends on type "A" containers and space available.
Door bundles (max size, wt)/combat equipped paratroops (through paratroop doors)	2 @ 500 lbs ea. and 48 in x 30 in x 66 in or less/26 paratroops	2 @ 500 lbs each/26 paratroops
AHKIO sleds/combat equipped paratroops	2/26 paratroops	2/26 paratroops
CRRC or inflated assault boat/paratroops (See Note 3)	2/19 paratroops or 1/20 paratroops (See Note 3)	4/18 paratroops
Heavy Equipment Platforms/Paratroops	2 platforms/20 paratroops	2 platforms/20 paratroops
Container Delivery System/Paratroops	12 containers/8 paratroops	12 containers/8 Paratroops

NOTE 1: There is no combination airdrop capability with HSSLADS.

NOTE 2: HSSLADS CRS loads may be positioned while airborne for multiple DZs.

NOTE 3: 3 to 4 CRRCs may be airdropped on a single pass when stacked and rigged for airdrop IAW Army FM 10-542/Air Force TO 13C7-51-21.

Load Capabilities For The MC-130H Talon II

The following tables illustrate maximum aircraft load capabilities for the MC-130H Combat Talon II aircraft. Load capabilities will be reduced if operating in high terrain and/or temperature environments.

Table 5-7. MC-130H Load Capabilities for Ground Troop or Personnel Airdrop

LOAD	
Ground troops (excluding aircrew)	72
Paratroops (including safeties and jumpmaster)	50

Table 5-8. MC-130H Load Capabilities for Equipment Airdrop

LOAD	NUMBER THAT CAN BE DROPPED ON A PASS	TOTAL LOAD
High Speed Low Level Aerial Delivery System (HSSLADS) bundles	Single bundle up to 600 lbs & multiple bundle on a single pass up to 2200 lbs.	Multiple bundles up to 2200 lbs.
Container Release System (CRS) bundles. (See Note 1)	Depends on type of container used. Multiple bundles up to 6667lbs.	Depends on type of container used. Total weight not to exceed 6667 lbs.
Door bundles (max size and weight)	Multiple bundles. Weight restricted to 500 lbs per bundle.	Multiple bundles. Weight restricted to 500 lbs per bundle.
Combat Rubber Raiding Craft (CRRC) (See Note 2)	4	4
Heavy equipment Platforms	3	3
Container Delivery System (CDS)	16	16

NOTE 1: The CRS bundles can be airdropped from the aircraft ramp. Number, size and weight of bundles is a limiting factor. Max weight for the MC-130 ramp is 5000 lbs including the weight of the dual rails (336 lbs).

NOTE 2: 3 to 4 CRRCs may be airdropped on a single pass when stacked and rigged for airdrop IAW Army FM 10-542/Air Force TO 13C7-51-21.

Table 5-9. MC-130H Load Capabilities for Equipment and Personnel (Combination Airdrop)

LOAD	NUMBER THAT CAN BE DROPPED ON A PASS OVER DROP ZONE (DZ)	TOTAL LOAD
CRS bundles/combat equipped paratroops	Depends on type "A" containers/ 20 paratroops. Total static lines not to exceed 20 on anchor cable.	Depends on type containers and space available.
Door bundles combat equipped paratroops (through paratroop doors)	Dependent on number of door bundles vs number of paratroops. No more than 20 static lines per cable.	Dependent on number of door bundles vs number of paratroops. No more than 20 static lines per cable.
AHKIO sleds/combat equipped paratroops	2/26 paratroops	2/26 paratroops
CRRC or inflated assault boat/paratroops (See Note 3)	2/18 paratroops or 1/19 paratroops	2/18 paratroops or 1/19 paratroops
Heavy Equipment Platforms	3 Platforms/20 Paratroops	3 Platforms/20 Paratroops
Container Delivery System	8 containers/12 Paratroops	8 Containers/12 Paratroops

NOTE 1: There is no combination airdrop capability with HSSLADS.

NOTE 2: HSSLADS and CRS loads may be positioned while airborne for multiple DZs

NOTE 3: 3 to 4 CRRCs may be airdropped on a single pass when stacked and rigged for airdrop IAW Army FM 10-542/Air Force TO 13C7-51-21

General Characteristics and Specifications

Table 5-10. MC-130E vs MC-130H Comparisons

GENERAL CHARACTERISTICS		
	MC-130E Combat Talon I	MC-130H Combat Talon II
Primary Function	Infiltration, exfiltration, resupply of special operations forces, & aerial refueling of special operations helicopters.	Infiltration, exfiltration, & resupply of special operations forces
Builder	Lockheed Aircraft Corp.	Lockheed Aircraft Corp.
Power Plant	Four Allison T-56-A-15 turboprop engines	Four Allison T-56-A-15 turboprop engines
Thrust	4,910 shaft horsepower each engine	4,910 shaft horsepower each engine
Length	100 ft, 10 inches (30.7 meters)	99 ft, 9 inches (30.4 meters)
Height	38 ft, 6 inches (11.7 meters)	38 ft, 6 inches (11.7 meters)
Wingspan	132 ft, 7 inches (40.4 meters)	132 ft, 7 inches (40.4 meters)
Speed	300 mph (480 kph)	300 mph (480 kph)
Ceiling	33,000 ft (10,000 meters)	33,000 ft (10,000 meters)
Load	53 troops or 26 paratroopers	75 troops or 52 paratroopers
Max Takeoff Weight	155,000 pounds (69,750 kilograms)	155,000 pounds (69,750 kilograms)
Range	3,110 statute miles (2,700 NM) Unlimited w/air refueling	3,110 statute miles (2,700 NM) Unlimited w/air refueling
Crew	5 officers (2 pilots, 2 navigators & 1 electronic warfare officer (EWO); 4 enlisted (1 flight engineer, 1 communications specialist, and 2 loadmasters)	4 officers (2 pilots, 1 navigator & 1 electronic warfare officer (EWO); 3 enlisted (1 flight engineer and 2 loadmasters)
Type Fuel	JP-8	JP-8

AC-130H/U SPECTRE GUNSHIP**AC-130H SPECTRE Gunship**

These heavily armed aircraft incorporate side-firing weapons integrated with sophisticated sensor, navigation and fire control systems to provide surgical firepower during extended loiter periods, at night and in adverse weather.

Spectre has an impressive combat history. During Vietnam, gunships destroyed more than 10,000 trucks and were credited with many life-saving close air support missions. AC-130s suppressed

enemy air defense systems and attacked ground forces during Operation Urgent Fury in Grenada. This enabled the successful assault of Point Salines airfield via airdrop and airland of friendly forces.

Gunships had a starring role during Operation Just Cause in Panama by destroying Panamanian Defense Force Headquarters and numerous command and control facilities by surgical employment of ordnance in an urban environment. As the only close air support platform in the theater, Spectre was credited with saving many friendly lives.

Mission

The AC-130 Gunship is a basic C-130 modified with side mounted guns and various sensors that make it highly adaptable to a variety of special missions. The Gunship can provide sustained and surgically precise firepower in a variety of scenarios.

Within permissive environments, the AC-130 is effective in the following roles:

- Close Air Support (CAS)
- Interdiction
- Armed Reconnaissance
- Point Defense
- Escort (Convoy, Naval, Train, Rotary Wing)
- Surveillance
- Combat Search And Rescue (CSAR)
- Landing/Drop Zone (LZ/ DZ) Support
- Limited Airborne Command and Control



AC-130 Live Fire Mission

The side-firing gunship delivers ordnance while in a pylon turn around the target. Targets are visible and can be attacked throughout the entire orbit and attack run-in headings are usually not desired. The gunship is particularly effective at troops in contact (TIC) fire support.

Weapons

Firing altitude depends on terrain, threat environment, and weather. Gun selection depends on target type and damage desired. To limit collateral damage, a live-fire area may be required

to boresight weapons prior to employment. The gunship weapons do not have a hard-kill capability against heavy armor or bunkers. However, the 105mm has Superquick fuses with both point detonation and 0.05 sec delay, concrete penetrators, and proximity fuses for airburst. All 20mm, 25mm, and 40mm have point detonate fuses.

Table 5-11. AC-130H/U Weapons Capability

WEAPON	TARGET TYPES	MIN/MAX (AGL)	ALT	ROUND/MIN	COMBAT LOAD	REMARKS
20mm	Personnel (light cover) and small vehicles	3000'/7000'		2500	3000 HEI	AC-130H only, fixed guns
25mm	Personnel (light cover) and small vehicles	3000'/15000'		1800	3000 HEI	AC-130U only, trainable guns
40mm	Personnel (medium cover) and small vehicles	4500'/18000'		100	256 HEIP	
105mm	Personnel, vehicles/APC and buildings	4500'/20000'		6-10	100 HEI/WP	

Weapons Delivery

Training: No-fire headings may be imposed or may be established by the aircrew, due to ordnance ricochet fans when the target is between the gunship and the friendly position.

- Fire No Closer Than:
 - 500 meters with the 20mm/25mm/40mm
 - 650 meters with the 105mm

- No Fire Headings Closer Than:
 - 1600 meters with the 20mm
 - 2000 meters with the 25mm
 - 950 meters with the 40mm
 - 700 meters with the 105mm

Combat

The ground forces commander must accept responsibility each time ordnance is requested inside of the Joint Munitions Effectiveness Manual (JMEM) Danger Close range.

- JMEM Danger Close Range for the 20mm/25mm/40mm: inside 125 meters
- JMEM Danger Close Range for the 105mm: inside 200 meters

Aircraft Comparison

Although the AC-130H and AC-130U use very dissimilar avionics and other systems, fire support to the ground party is generally comparable. The capabilities of the AC-130U will not be required for most fire support missions, but provide benefits under certain circumstances. The following describes some of the most important employment differences:

- The strike radar gives the AC-130U improved adverse weather capability.
- The AC-130Us increased fire control accuracy results in better hit performance against point targets. This does not appreciably change the extent of collateral damage.
- Dual target attack allows the AC-130U to service two targets simultaneously. Fairly restrictive parameters must be met to employ this technique. Crew restrictions also apply.
- The 25mm gun on the AC-130U can be brought to bear quickly because it is trainable, and can be employed throughout much of the gunship flight envelope. The 25mm is only effective against soft targets. Portions of the 25mm gun system are still under development, and this weapon is not as reliable as a mature system.
- The pressurization system on the AC-130U improves deployability and range.
- The AC-130U sensor system is still evolving. The ALLTV is superior to the LLLTV on the AC-130H, but the IR on the AC-130H is better than the IR on the AC-130U. Upgrades to the IR on both aircraft are scheduled to occur within a couple of years. The AC-130H has already received 2 major IR upgrades since 1990.
- The defensive avionics on the AC-130U are generally slightly better than on the AC-130H, but in certain threat environments the AC-130H is at least equal. Detailed threat analysis must be accomplished for specific missions.
- PPN-19 and SST-181 can be used with both the AC-130E and U. The AC-130H is compatible with the small PRD-7880 Tactical Electromagnetic Impulse Generator (TEMIG).

Limited Threat Capability

- Mission success is largely determined by the threat.
- The AC-130 operates best during cover of darkness. It is extremely vulnerable during daylight operation and is most suited for operations in a low threat environment. By operating over an overcast, the AC-130U can degrade daylight threats, but must rely on the radar as its only sensor.
- Mission execution and desired objectives are seriously degraded by radar guided anti-aircraft artillery, surface-to-air missiles, and some IR MANPAD systems. If radar threats are known or suspected, preemptive jamming or SEAD (suppression of enemy air defenses) is required. SEAD is preferable.
- Certain threats may dictate higher employment altitudes. This should be considered in mission planning, as sensor resolution decreases with altitude. As range increases fire control accuracy degrades slightly, reducing the gunships ability to hit point targets.
- The threat environment limits the use of laser illuminators (the "BURN"), as it illuminates both the aircraft and the ground party to anyone properly equipped.



AC-130E

Planning Considerations

- All missions benefit from face-to-face briefings, especially fire support missions.
- Common imagery, comm-out procedures, charts, and local operating procedures enhance mission success.
- Normal special operations missions planning-to-execution cycle covers 72 hours, but may be shortened due to specific mission constraints. Normal tactical mission planning-to-execution cycle is approximately 24 hours.
- AC-130 performance is marginal at altitudes above 15,000 feet MSL due to high gross weights and aircraft performance limitations.
- AC-130 operations from Forward Operating Bases (FOBs) with high field elevations and/or high density altitudes require analysis by gunship planners for mission limitations.
- Limited number of aircraft and single home operating location makes covert deployment difficult.

- Large crews and extensive support package contribute to significant mission signature. Unimproved airfields are not acceptable due to high gross weights, performance limitations, and sensitive avionics.
- Gunship weapons have no hard-kill capability against heavy, or reactive armor, reinforced bunkers, etc.

Performance Considerations

- Prime Contractor: Lockheed Aircraft Co.
- Horsepower: 3,750 equivalent shaft power
- Wingspan: 132 ft. 7 in
- Length: 97 ft. 9 in
- Height: 38 ft. 6 in
- Unrefueled range (combat ammo load): AC-130U-2000 NM; AC-130H-1500 NM Unlimited with air refueling
- Unrefueled combat radius (1 hour loiter): 500 NM
- Speed: 250 Knots (True Airspeed) cruise. 300 mph (at sea level)
- Maximum gross weight: 155,000 lbs
- Emergency gross weight (WAR): 175,000 lbs
- Fuel load: 40,000 lbs (Inflight refuelable)
- Fuel type: JP-8
- Fuel consumption: 6,000 pounds per hour. 6,500 during low level

Aircrew

- Crew rest: 12 hours
- Tactical crew duty day: 12 hours. (16 hours with augmentation)
- Crew complement may vary depending on the mission type and duty day. Crew requirements for ferrying are less.
- Minimum tactical crew: AC-130U - 13; AC-130H - 14
- Maximum crew: 21

Time on Station

- Unless continuous surveillance is required, the AC-130 holds outside the target area to limit exposure of the aircraft and the ground party.
- Vulnerability increases with time spent over target, as the element of surprise is lost and chance for acquisition by the enemy increases.

Weather Capability

- The AC-130U has a good capability to deliver ordnance during adverse weather using the APQ-180 radar. The AC-130H has limited adverse weather capability using its electronic sensors.

- A ground controller may be present to correct the AC-130U gunfire for target, range, and magnetic bearing from the location of a beacon or reference point due to adverse weather. A ground controller is required for AC-130H adverse weather delivery.
- Visual sensors are seriously degraded by weather to include fog, haze, smoke, and clouds.

Marking Devices

Marking devices can expedite identification of friendly forces, improving fire support responsiveness and limiting the exposure time for the gunship. Beacons provide a rapid means to identify and update the friendly position. During instrument meteorological conditions beacons are the only way for the AC-130H to locate friendly positions. Radar reflective items may also be used with the AC-130U radar. These are line-of-sight methods, and are normally used with OFFSET firing mode. Beacon/reference point offsets should not normally exceed 1500 meters (1000 meters for Dual Target Attack - AC-130U only). Offset firing is not as accurate as direct mode of fire and are normally used in poor weather conditions with the ground commander or team leader calling misses and corrections to the aircraft. As a rule, the shorter the offset distance, the more accurate the weapon. The AC-130U can track the PPN-19 and SST-181 beacons using the strike radar. The AC-130H can track the PPN-19, SST-181, PRD-7880 (TEMIG) and personal locator system (PLS) beacons, but TEMIG and PLS are poor for offset firing.

Other Marking Devices

- Strobe Light
- Flashlights And Vehicle Lights
- Fire Flies
- "Chem" Lights
- Reflective Tape
- Pen Gun Flares
- Signaling Mirrors
- Laser pointers (LPL-30, GPC-1a, etc.)
- Tracer Fire
- Mortar/Artillery Marking Rounds

Mission Briefing

- FRIENDLY LOCATION - Universal Transverse Mercator (UTM), range in meters, magnetic bearing from reference point, etc. Include all friendly locations.
- FRIENDLY MARK - Beacons, IR strobe lights, flares, etc.
- TARGET LOCATIONS - UTM coordinates, range and bearing from observer, Target Reference Point (TRP), etc.
- TARGET DESCRIPTIONS - Number and type.
- TARGET MARKING - Sparkle (i.e. LPL-30), tracer, etc.

SPECIFIC EMPLOYMENT

Close Air Support (CAS) and Troops in Contact (TIC)

The AC-130 is an excellent low threat, night CAS platform. The gunship can provide surgical fire support with limited collateral damage, and it can remain on station for extended periods of time. The visual sensors and radar (AC-130U) provide real-time reconnaissance of the employment area. Unlike other fixed-wing aircraft, CAS assets which must have qualified forward area controllers (FAC) for ordnance delivery in proximity to friendlies, the AC-130 self-FACs, so ordnance delivery can be controlled by fire support officers, team leaders, etc. Since the AC-130 delivers ordnance through a pylon turn, the target is usually visible and may be engaged throughout the entire orbit. As a result, run-in headings are not appropriate. The first consideration for CAS missions is to positively identify the friendly position. Various marking devices may be used by friendly forces to expedite acquisition. Radio contact with the ground forces will be maintained at all times during firing, unless preplanned comm-out procedures are coordinated in advance. The following CAS guide is a briefing guide designed specifically for the gunship. To reduce communications during preplanned missions, coordinate as much of this information as possible in advance. The J-Fire "nine-line" briefing may be used, but it is inefficient and less desirable.

Interdiction

Air Interdiction is defined as air operations conducted to destroy, neutralize, or delay the enemy's potential before it can be brought to bear effectively against friendly forces. At such distances that detailed integration of each air mission with the fire and movement of friendly forces is not required. The gunship is best suited to strike small targets in a permissive environment where limited collateral damage is required. The gunship's accuracy, low yield munitions, and target identification capability reduces the risk of collateral damage. However, the gunship lacks both great hitting power and area coverage capability, which limits the potential for damage to hardened or large area targets.

Armed Reconnaissance

Armed Reconnaissance is flown with the primary purpose of locating and attacking targets of opportunity (i.e. enemy material, personnel, and facilities) in assigned or general areas or along assigned lines of communication (LOC), and not for the purpose of attacking specific briefed targets. The gunship can effectively search LOCs, however the narrow field of view of the sensors limits the gunship's ability to search large areas. The time required to perform armed reconnaissance must be considered with respect to the threat.

Helicopter, Landing Zone (LZ), and Drop Zone (DZ) Support

The gunship can provide escort, LZ/DZ security, and fire support for helicopter operations. Mission accomplishment is achieved through a joint pre-brief of route, special procedures, and establishment of a communications net (fire support coordination net). The gunship can assist helicopters in search and rescue missions as necessary. Helicopter use of beacons greatly aids in vectoring. The gunship can provide LZ/DZ weather and threat updates to all participating aircraft. The gunship can also destroy unrecoverable loads that have landed off a DZ and should not fall into enemy hands.

Fighter Escort Operations

Fighters can operate with the gunship as part of a strike package. Fighter assets provide additional strike capability with greater standoff, hard-target kill capability, and larger area suppression weapons. Fighters can also provide real time threat suppression in the target area and during enroute portions of the mission. Operations with fighter aircraft require effective teamwork between the dissimilar aircraft and increases the complexity of crew coordination on the gunship. Flexibility and situational awareness must be maintained at all times. The gunship normally acts as a Forward Air Controller (FAC) for its fighter escort, and may be used to control other strike aircraft. The gunship's FAC capabilities include:

- Marking targets with aircraft weapons (sparkling)
- Using natural references such as providing information from visible terrain features, ground markers, or easily distinguished fires in the area
- Designate targets using laser target designator
- Provide strike aircraft with Battle Damage Assessment (BDA)

SPECIALIZED MISSIONS

Point Defense

This mission is essentially a preplanned CAS mission. The situation may allow for in-depth planning and coordination, but procedures are the same as for any CAS scenario.

Escort

Another version of CAS is escort. The gunship can provide convoy, naval, train, helicopter escort/vectoring surveillance and limited protection of friendlies from enemy ambush. Communications with the supported commander are essential. Mission accomplishment is achieved through a joint brief of route, special procedures, and establishment of a communications net. Ground parties using electronic beacons greatly aid in force vectoring.

Reconnaissance

The night capabilities of the gunship, combined with its range and endurance make the gunship a viable reconnaissance platform. The gunship has the capability to record all the sensors, with audio and video imagery. The gunship is more vulnerable to enemy threats than other tactical reconnaissance platforms.

Combat Recovery

The gunship can support combat recovery operations in a permissive environment. These missions include combined operations with helicopters and fighters. Because of the potential complexity of these missions, thorough mission planning is essential.

Limited Airborne Command and Control

The gunship can be used to relay information between ground parties, or as a ground-to-air or air-to-air liaison on a limited basis. Planners must realize that any planned use of the gunship in this capacity could adversely affect the gunship's tactical mission and therefore must be weighed carefully.

MC-130P COMBAT SHADOW

MC-130P Aerial Refueling of Two MH-60Gs

AFSOC MC-130P (referred to as the HC-130 prior to 1996) were deployed to Saudi Arabia and Turkey in support of Desert Storm. They operated from main bases and remote locations. Their missions included air refueling of special operations forces helicopters over friendly and hostile territory, psychological operations, and leaflet drops.

- Builder: Lockheed
- Power Plant: Four Allison T56-A-15 turboprop engines
- Thrust: 4,910 shaft horsepower each engine
- Length: 98 ft 9 in (30.09 meters)
- Height: 38 ft 6 in (11.7 meters)
- Wingspan: 132 ft 7 in (40.4 meters)
- Speed: 289 miles per hour (at sea level)
- Ceiling: 33,000 ft
- Maximum Takeoff Weight: 155,000
- Range: Beyond 4,000 miles
- Crew: Four officers (pilot, copilot, primary navigator, secondary navigator); four enlisted men (flight engineer, communications systems operator, two loadmasters)
- Air Force Inventory: Active Component 24/Reserve Component 4

Mission

The mission of the MC-130P is clandestine formation/single-ship intrusion of hostile territory to provide aerial refueling of special operations helicopters and the infiltration, exfiltration, and resupply of special operations forces by airdrop or airland operations. To perform these missions, the primary emphasis is on night vision goggle (NVG) operations, but they can be accomplished

during the day. The MC-130P primarily flies missions at night to reduce probability of visual acquisition and intercept by airborne threats. Secondary mission capabilities may include airdrop of small special operations teams, small bundles, and combat rubber raiding craft; as well as NVG takeoff and landing procedures, tactical airborne radar approaches, and in-flight refueling as a receiver.

Equipment

Some aircraft are currently being modified with the Universal Air Refueling Receptacle Slipway Installation (UARRSI) system for inflight refueling as a receiver and all aircraft are modified with the self-contained navigation systems (SCNS) and Global Positioning System (GPS). The Special Operations Forces Improvement (SOFI) modification will give the aircraft an NVG HUD, a new modified radar, and an Infrared Detection System (IDS). These modifications will greatly increase the range and navigational accuracy of the MC-130 P. The aircraft normally carries eight crewmembers. Depending on mission profile and duration, additional crewmembers are carried. All crewmembers are NVG/formation and helicopter air refueling qualified. Special qualifications include high altitude low opening (HALO) airdrop, NVG airland, formation lead, inflight refueling (IFR), and Rigging Alternate Method Zodiac (RAMZ).

The following equipment is installed on the MC-130P:

- Inflight refueling system for helicopters
- Inflight refueling, receiver operations (UARRSI)
- Internal fuel tanks (Benson tanks)
- Airborne radar (APN-59D); APN-59E improved radar (SOFI aircraft)
- IFF Radar
- Self Contained Navigation System (SCNS)
- Doppler radar navigation system (APN-147); Doppler velocity sensor (SOFI aircraft)
- Radar warning receiver (ALR-69); ALR-69(V) (SOFI aircraft)
- Chaff and flare dispensers (ALE-40)
- Infrared Missile Warning Receiver (IRWR) (SOFI aircraft)
- Secure Speech (KY-58/75) UHF, VHF, VHF-FM, HF and SATCOM radios with HAVE QUICK II capability
- KY-879 data burst capability
- Night Vision Goggles (F4949)
- NVG Heads-Up Display (SOFI aircraft)
- Nose mounted Infrared Detection System (SOFI aircraft)

Employment

The MC-130P employs night terrain contour (NTC) procedures. NTC missions are flown in VMC using NVGs. The profile is flown at 500 feet above ground level using terrain masking. If necessary, the mission can be flown with visual and electronic-controlled emissions. The range of the mission depends on several factors: length of time on the low-level route, enroute weather, winds, and the air refueling offload requirements (see Planning Factors). Portions of the profile may be flown at high altitude to minimize fuel consumption. NTC procedures will be used to avoid enemy detection in a non-permissive environment to get the aircraft to the objective area.

Formation

The MC-130P normally flies in a formation of aircraft to provide the capability of multiple simultaneous refueling of large helicopter formations. An airborne spare tanker is also a part of the formation.

Air Refueling

This is the primary mission of the MC-130P. To significantly decrease the amount of time required to refuel helicopters, the MC-130P can simultaneously refuel two helicopters. Minimum refueling altitude is 1,000 ft AGL for training. For operational missions, lower altitudes may be used. Refueling is accomplished on NVGs.

Airdrops

The MC-130P airdrop personnel or equipment. The drop zone point of impact (PI) must be marked. The location, size, and marking of drop zones must conform with AFI 13-217.

- Release point computation. Normally the navigator determines the release point using manual Computed Air Release Point (CARP) procedures, parachute ballistic data, and wind effects. He visually directs the pilot to the release point. Alternate methods of deployments include Visual Ground Marked Release System (GMRS), Verbally Initiated Release System (VIRS), jumpmaster directed airdrops, and parabundle and free-fall drop procedures for door bundles.

Personnel Drops

The MC-130P can be used for both static line and free-fall jumps.

- Static line low altitude airdrops: 130 KIAS at a minimum of 800 ft AGL.
- The aircraft is not configured to retrieve static lines from the ramp. All static line jumps must be accomplished from the paratroop doors. With two loadmasters, one per door, the maximum number of jumpers that can be deployed is six per door per pass, or 12 per pass with 15 foot static lines, a U-clamp must be used on the anchor cable. The purpose of the U-clamp is to effectively shorten the static line to prevent fouling of the static lines on the external rails of the MC-130P cargo door.
- High Altitude Low Opening (HALO) airdrops are made above 3000 ft AGL where a freefall is planned prior to parachute opening. The navigator will determine the High Altitude Release Point (HARP). High Altitude High Opening (HAHO) airdrops are normally made above 10,000 ft AGL, but with no freefall, in order to travel long distances. Both are flown at 130 KIAS.

Equipment Drops

Parabundle and free-fall door bundle drops are aircrew directed at very low altitudes. Parabundles are dropped at 300ft AGL with parachutes, or 150ft AGL without parachutes. Both of these drops are flown at 130 KIAS.

Airland

Infiltration and exfiltration may be conducted at overt landing zones. Landing zones and lighting must conform to AFI 13-217. The landing zone should be hard surfaced. Except for contingency/emergency operations, runway lengths less than 3000 feet will not be used.

- Minimum runway width is 60 feet.
- Minimum taxiway width is 30 feet.
- Runway lighting must be available. **(CAN BE COVERT)**

Planning Factors and Considerations

- Twelve hours of crew rest prior to flight is required once all planning is completed.
- Three hours are required prior to takeoff for briefings, final planning, aircraft preflight checks, engine start, taxi and takeoff.
- Most missions are 5 to 6 hrs in duration, to include 3 to 4 hrs of low-level.
- Load capabilities are dependent on aircraft configuration and fuel load.

Table 5-12. MC-130P Max Load Sizes

PARATROOPERS	26
Door bundles	Max size: 48 in x 30 in x 66 in or less Max weight: 500 lbs Max bundles per pass: 2
Door bundles and personnel	Limited to 1 bundle and 6 troops per pass

Crew Composition.

Table 5-13. MC-130P Aircrew Composition

TYPE CREWMEMBERS	OF	NUMBER OF CREWMEMBERS	CREW POSITION
Combat Crew		8	Pilot, Copilot, Navigators (2), Flight Engineer, Communications Specialist, and Loadmaster
Basic Crew		6	Pilot, Copilot, Navigator, Flight Engineer, Communications Specialist, and Loadmaster

Crew Duty Day

- 12 hours training
- 16 hours operational
- 22 hours augmented. (See Note)

NOTE

Requires one additional Aircraft Commander, Navigator, Flight Engineer, and Communications Specialist for overwater flights in excess of 16 hours.

Performance Characteristics

Table 5-14. MC-130P Aircraft Performance Characteristics

CHARACTERISTIC	CRITERIA
Max Gross Weight	175,000 lbs (waiver required above 155,000lbs)
Empty Weight	89,000 to 93,00 lbs depending on model and configuration
Usable Fuel	*79,000 lbs available offload with a 6 hour mission (15,000 to 20,000 lbs per tanker without waiver)
Number of Troops	34 with equipment (airland)
Air Refueling Transfer Rate	1,000 lbs per minute
Combat Range	12.5hrs(4,277 NM) with no air refueling 12.5 hrs(2,875 NM) low-level
Max AR Speed	120 KIAS
Normal Cruise	250 KIAS
Low-level Airspeed	210-220 KIAS, 200-250 kts ground speed
Max Speed	290 KIAS
Personnel drops	130 KIAS, 800 ft min AGL (for training)
Parabundles	130 KIAS, 300 ft min AGL
Bundles (Freefall)	130 KIAS, 150 ft min AGL
Type Fuel	JP-8

* AT 175,000 AGW/155,000lbs AGW MAX FUEL 57,226

EC-130 COMMANDO SOLO

In 1990 the EC-130 joined the newly formed Air Force Special Operations Command and has since been designated Commando Solo, with no change in mission. This one-of-a-kind aircraft is consistently improving its capabilities. The next few years should see continued enhancements to the EC-130 and its world-wide mission.

The EC-130 was deployed to both Saudi Arabia and Turkey in support of Desert Shield and Desert Storm.

Their missions included broadcasts of "Voice of the Gulf," and other programs intended to convince Iraqi soldiers to surrender. Most recently, in 1994, Commando Solo was utilized to broadcast radio and television messages to the citizens and leaders of Haiti during Operation Uphold Democracy. The EC-130s deployed early in the operation, highlighting the importance of PSYOP in avoiding military and civilian casualties. President Aristide was featured on the broadcasts which contributed significantly to the orderly transition from military rule to democracy. The 193rd SOG is based at Harrisburg International Airport, Middletown PA.

- Builder: Lockheed
- Power Plant: Four Allison T56-A-15 Turboprop Engines
- Length: 100 ft 6 in; Height: 38 ft 6 in (11.7 meters)
- Wingspan: 132 ft 7 in (40.4 meters)
- Speed: 299 mph
- Ceiling: 22,000 ft
- Maximum Takeoff Weight: 155,000 lbs
- Range: 2,100-plus miles (unlimited with in-flight refueling)
- Crew: Four officers (pilot, copilot, navigator, mission control chief/EWO); seven enlisted (flight engineer, loadmaster, five mission crew)
- Air Force (ANG) Inventory: 6

Mission

Commando Solo is an airborne electronic broadcasting system utilizing four EC-130E Rivet Rider (RR) aircraft operated by the 193rd Special Operations Group, Pennsylvania Air National Guard. Commando Solo conducts psychological operations and civil affairs broadcast missions in the standard AM, FM, HF, TV and military communications bands. Missions are flown at



EC-130E

maximum altitudes possible to ensure optimum propagation patterns. This system may also be used to:

- Support disaster assistance efforts by broadcasting public information and instruction for evacuation operations.
- Provide temporary replacement for existing transmitters or expanding their areas of coverage.
- Other requirements, which involve radio and television broadcasting in its frequency, range.

EQUIPMENT

Transmitters

A total of six transmitters cover the frequency range of 450 KHz to 350 MHz. These transmitters are capable of high output power and several modes of operation. Significant advantages of these transmitters are that the parameters of the transmission can be adjusted to coincide with established telecommunication standards. Transmission frequencies can be discrete, which is to say transmissions will not interfere with adjacent frequencies or channels.



EC-130E

Transmitting Antennas

Commando Solo utilizes nine fixed antennas for WE transmissions and one adjustable-length trailing wire for the MH and HF operations. The single trailing wire antenna limits the system to one transmission at a time in the MF/HF bands. Radiation patterns of all antennas show signal strength greatest at points broadside to the aircraft, and nulls in signal strength at points forward and aft of the aircraft.

Effective Radiated Power (ERP)

The ERP of a specific transmission will depend on the combination of the power of the transmitter, line loss between the transmitter and antenna, and the efficiency and gain of the associated antenna. Commando Solo transmission line loss varies between 0 dB and 1.5 dB.

Radio Receivers

Eight radio receivers provide frequency coverage from 200 KHz to 1000 MHz. In addition, four spectrum analyzers, used to check transmission quality, provide limited receiver capability. The associated antennas are omnidirectional in pattern; therefore, the receiver section does not have DF capabilities. Reception is degraded by transmission in proximity of the receiver signal.

Secure Communications

Two KY-58 systems are installed, one system for the flight crew ARC-164 radios and the second for the mission crew ARC-164 and ARC-186 radios. The two ARC-164 radios assigned to the flight crew are equipped with the HAVE QUICK modification.

Employment

The EC-130 flies during either day or night scenarios and is air refuelable. A typical mission consists of a single-ship orbit, which is offset from the desired target audience. The targets may be either military or civilian personnel. Secondary missions include command and control communications countermeasures (C3CM) and limited intelligence gathering.

Civic Action

Commando Solo capabilities can support civil actions by broadcasting via radio or TV.

- Educational programs and telecasts
- Messages/speeches by government officials of friendly countries
- Entertainment and cultural programs

MH-53J PAVE LOW III***MH-53J PAVE LOW III***

The MH-53J Pave Low III heavy-lift helicopter is the largest and most powerful helicopter in the Air Force inventory, and the most technologically advanced helicopter in the world. The terrain-following and terrain-avoidance radar, forward-looking infrared sensor, inertial navigation system with GPS, along with a projected map display, enable the crew to follow terrain contours as low as 100 feet and avoid obstacles even in adverse weather.

Specifications

- Builder: Sikorsky
- Power Plant: 2 General Electric T64-GE/-100 engines
- Thrust: 4330 shaft horsepower per engine
- Length: 88 ft (28 meters)
- Height: 25 ft (7.6 meters)
- Rotary Diameter: 72 ft (21.9 meters)
- Speed: 130 knots (110 knots for flight planning purposes)
- Ceiling: 16,000 ft
- Maximum Takeoff Weight: 50,000 lbs (waiver required above 46,000 lbs)
- Range: 600 nautical miles (unlimited with aerial refueling)
- Armament: Combination of three 7.62 miniguns or .50 caliber machine guns
- Crew: Two officers (pilots) and four enlisted (two flight engineers and two aerial gunners)

Mission

The MH-53J Pave Low helicopter is a night, adverse-weather special operations weapon system that was designed to be a flight lead platform for less capable aircraft. The primary mission of the MH-53J is to conduct covert low-level, long-range undetected penetration into denied areas,

day or night, in adverse weather for infiltration, exfiltration, or resupply of special operations forces to include airdrops and heavy-lift sling operations. The aircraft can perform a variety of other missions to include shipboard operations, radar vectoring, and combat search and rescue.

EQUIPMENT

Under the Air Force's Pave Low IIIE program, all Air Force H-53s were modified and designated MH-53Js. Their modifications include improved Pave Low avionics, satellite communications, shipboard modifications and structural improvements. All MH-53Js are modified for shipboard operations and feature automatic main rotor blade and tail rotor pylon fold. The MH-53J is also equipped with armor plating and a combination of three guns, 7.62mm miniguns or .50 caliber machine guns. It can be equipped with 27 troop seats or 14 litters. An external cargo hook has a 20,000 pound (9,000 kilograms) capacity. This highly modified aircraft is equipped with a rack of navigation, communication, special/auxiliary equipment, defensive systems to include the following:

Navigation Equipment

The Enhanced Navigation System (ENS) provides a precise navigational capability that is essential for low-level, night/adverse weather operations. The ENS consists of several subsystems to include a mission computer, inertial navigation unit (INU), global positioning system and video symbology display system (VSDS). The ENS interfaces with a variety of other systems to include the Doppler, Projected Map Display (PMD), Terrain Following/Terrain Avoidance (TF/TA) radar, and Forward Looking Infrared (FLIR).

Doppler Navigation System

This system provides continuous Doppler derived measurements of the helicopter's velocity vector, continuous computation of present position, and worldwide navigation guidance.



MH-53J Fast Rope Operations

Projected Map Display

This system provides a moving map display showing a continuous, pictorial representation of the helicopter's horizontal position and movement relative to the terrain.

Terrain Following/Terrain Avoidance (TF/TA) Radar

This system is a multi-mode, J-band radar that provides the operator with radar video imagery of terrain features, other radar-reflective targets, terrain-following/terrain avoidance, weather avoidance and air-to-ground range data.

Forward Looking Infrared (FLIR)

This is a controllable, infrared surveillance system, which provides a video infrared image of terrain features, and ground or airborne objects of interest. The FLIR is a passive system, and detects IR energy emitted by any object in daylight or darkness and displays it on the two cockpit monitors.

Special/Auxiliary Equipment

- The Rescue Hoist is capable of raising and lowering 600 pounds. The hoist has approximately 240 feet of usable cable and is used to raise and lower a rescue sling, a basket, or a forest penetrator.
- The External Cargo Hook provides capability of supporting sling loads, rated to 20,000 pounds capacity.
- The Hover-coupler gives the crew the ability to transition from forward flight to a preset altitude(or a landing) in adverse weather by using a small hover coupler “joy stick”.
- The Fast Rope System allows for rapid insertion of large numbers of personnel in areas where landing is impractical or impossible. Up to three ropes may be used: two from the overhead ramp and one from the personnel door.
- The Aircrew Eye and Respiratory System (AERPS) provides crews with the ability to operate in a biological or chemical environment. Each system is self contained, mobile, and can be powered by a portable battery or the aircraft electrical system.
- Data Transfer Module (DTM) is a data storage device (similar to a floppy disk) used to store and transfer flight planning data. Aircrew can flight plan by using a STAMPS or SOFPARS computer, transfer the flight planning data onto a DTM, and then load the data into the aircraft's ENS computer.
- The Personnel Locator and Rescue System (LARS or PLS), AN/ARS-6(V) is designed to locate survivors when they are equipped with the AN/PRC-112A(V) Survival Radio Set. The PLS can provide steering guidance to any source of continuous wave signal and can provide two-way communications with survivors.
- Aircraft Lighting consist of a variety of interior and exterior white and Night Vision Goggle (NVG) compatible Infra Red lighting. Exterior lights include a hover light, two controllable spotlights, an SX-5E Controllable IR light, and a Signal Number Light. The hover light is a white light used for non-covert hoist or cargo sling operations. The controllable spotlights, one controllable by each pilot, are dual purpose and can emit white or Infra Red light. The

SX-5E is a 500 watt Xenon lamp that provides a high intensity source of infra-red light. The Signal Number Lights are seven segmented lights that are mounted in the aft left and right cabin windows. The units display a single segmented numerical digit from 0-9, in a visible green or covert IR mode. They may be used as a means of aircraft chalk I.D. or for passing covert messages between aircraft in a formation.

- Communications capabilities consist of UHF, VHF, FM, HF, and SATCOM radios, all of which are capable of secure communications. The UHF radio is HAVE QUICK capable. These radios are supplemented by the PLS radio which can be used as a back up UHF.

WEAPONS EMPLOYMENT

The MH-53J has three weapons stations: left window, right door, and ramp. Each station can mount either an XM-218 .50 caliber machine gun or GAU-2 B/A 7.62mm minigun. A crewmember at each station manually operates the weapons.

The weapons are used primarily for self-defense and enemy suppression. The helicopter was not designed for use as an attack gunship platform. However, the helicopter weapons are capable of providing suppressive fire support for teams on the ground. Crewmembers are trained to fly L attack, dogbone, racetrack, figure 8 and spooky gun patterns as per AFSOCI 11-208 for fire support missions. Weapons training conducted during both day and night, is routine with an average of two missions per week per crewmember.

The typical gun configuration is a GAU-2 B/A 7.62 minigun at the left and right station with a GAU-18 .50 cal on the tail. The minigun is normally used for soft targets and troop suppression, which requires a high rate of fire (2,000-4,000 rounds per minute). The .50-cal allows the helicopter to engage light armor and reinforced positions at greater ranges. Each weapon system is capable of mounting an Infrared Aiming Device (IRAD) which enhances target acquisition. The type of threat and mission requirements will dictate the weapons configuration.

7.62 Miniguns

The 7.62mm miniguns are air-cooled, link-belt fed, and have a maximum effective range of 1,500 meters with tracer burnout at 750 meters. The weapon has an adjustable rate of fire of 2,000 or 4,000 RPM. The crewmembers currently fire ball ammunitions with a mix of four ball to one tracer (4:1), or a 9:1 mix to prevent goggle shutdown on low-illumination nights. The ammo complement without reloading is 3,000 to 4,000 rounds.

.50cal Machine Gun

The .50cal machine guns are air-cooled; link-belt fed, mechanically operated and fired, and are capable of firing 750 to 850 RPM. The .50cal has a maximum effective range of 3,000 meters with a tracer burnout of 1,500 meters. For training purposes, a ball ammunition mix of 4:1 is used. For actual employment, this changes to four armor-piercing incendiary and one armor piercing incendiary tracer (APIT). Ammunition is fed to the gun in one of two ways; a 100 round ammo can attached to the gun or a 1300 round ammo container attached to the aircraft floor. The ammunition complement is 500 rounds per gun for training and 800 to 1300 rounds for combat missions.

Planning Considerations.

Exercise/Operational missions can be executed with 24 hours notice. Once the initial planning is complete, crews go into 12 hours of crew rest prior to flight. After crew rest, the crew needs about 3 hours for final planning, crew briefing, and run-up time prior to take-off.

Weather Minimums.

- Air refueling weather minimums for VMC rendezvous is 5NM visibility and for radar rendezvous it is 1NM.
- Operational weather minimums. The MH-53J, with its unique systems configuration, is capable of operating in total IMC and/or total darkness. However, at the remote site, risk is reduced greatly if operations are conducted in VMC conditions with a minimum of 200-foot ceiling and 1/2 mile visibility, and 5 to 20 percent illumination; for air refueling operations, a minimum of 500-foot ceilings and 1 mile visibility also reduces risk. If the hover coupler is required for letdown from IMC, the maximum winds for this operation is 30 knots. The hover coupler is not required if weather is greater than 100 ft ceiling and ¼ mile visibility.

Altitude Restrictions.

- Minimum refueling altitude is 1000 ft AGL. For operational mission, refueling can be accomplished as low as mission dictates when refueling from an MC-130E/P.
- Minimum enroute altitude for approved low-level areas is 50 ft Outside low-level areas; 300 ft is the minimum enroute altitude.
- Landing areas. Landing areas should be surveyed and be a minimum of two rotor diameters (approximately 150 ft).

Wind Restrictions.

- Operational and support missions. No minimum specified. However, 45 knots is the maximum wind for starting and stopping the rotor. Surface winds in excess of 45 knots should be avoided.

Additional Planning Factors.

- Maximum aircraft gross weight: 50,000 lbs (waiver required above 46,000 lbs)
- Cargo area (unobstructed: Height-77 in, Width-90 in, Length-200 in)
- Troop capacity: 27 troop seats or 14 litters
- Normal planning cruise speed: 110 knots
- Normal fuel burn rate: 2500-2600 lbs per hour

Crew Qualification

Not all crewmembers are qualified for all types of missions. Specialized crew qualifications include shipboard operation, formation live fire with ground parties, night water and night water low-and-slow deployment operations.

Crew Duty Day

- Operational/contingency mission crew duty day: 14 hours
- Operational/contingency mission crew duty day with augmented crew: 18 hours



MH-53 Conducting a NEO Evacuation

Typical Combat Load and Weight

• Basic aircraft (Heaviest aircraft)	33,126
• Crewmembers (6x200 lbs)	1,200
• Emergency/misc. equipment	<u>75</u>
Operating weight (Zero fuel)	34,401
• Right and left minigun systems	466
• 7.62mm ammunition (6000 rnds)	390
• Tail .50 cal machine gun system	248
• .50 cal ammunition (500 rnds)	145
• Flare and chaff	<u>101</u>
Combat operating weight	35,751
• Internal 600 gallon auxiliary fuel tank	<u>287</u>
Combat operating weight with aux. tank	36,038

Fuel Endurance And Performance

Table 5-15. Examples of Fuel Endurance and Performance

	EXAMPLE 1	EXAMPLE 2	EXAMPLE 3
Maximum gross weight	46,000	50,000	50,000
Minus combat operating weight -	35,751	35,751	36,038
Payload and/or fuel	<u>10,249</u>	<u>14,249</u>	<u>13,962</u>
Payload on take-off	2,699	3,699	0
Fuel JP-8	7,550	10,550	13,962
Minus run-up and taxi fuel -	550	550	550
Usable fuel	7,000	10,000	13,412
Minus reserve fuel -	<u>900</u>	<u>900</u>	<u>900</u>
Fuel available	6,100	9,100	12,512
Endurance time	2 hr 26 min	3 hr 30 min	4 hr 48 min
Cruise speed	110 KIAS	110 KIAS	110 KIAS
Distance	268 NM	386 NM	481 NM
Combat Radius	134 NM	193 NM	241 NM

Example 1 is a MH-53J with a typical combat load and two 650-gallon external fuel tanks calculated with a 2,500 lbs per hour fuel burn rate.

Example 2 is a MH-53J with a typical combat load and two 650-gallon external fuel tanks calculated with a 2,600 lbs per hour fuel burn rate.

Example 3 is a MH-53J with a typical combat load and two 650-gallon external fuel tanks and one internal 600-gallon fuel tank calculated with a 2,600 lbs per hour fuel burn rate.

MH-60G PAVE HAWK

MH-60G Personnel Recovery

The MH-60G Pave Hawk is a modern, medium-lift, special operations helicopter for missions requiring medium-to-long-range infiltration, exfiltration, and resupply of special operations forces on land or sea. In addition, the SOF-unique mission equipment allows this aircraft to be used for recovery of injured special operations personnel. The MH-60G is equipped with forward-looking infrared radar to better enable the crew to follow terrain contours and avoid obstacles at night. The Air Force has 55 Pave Hawks in the active component and 25 in the Reserves.

MH-60G Specifications

- Builder: Sikorsky
- Power Plant: 2 General Electric T700-GE or T700-GE-01C engines
- Thrust: 1,560-1,630 shaft horsepower each engine
- Length: 64.8 ft (17.1 meters)
- Height: 16.8 ft (4.4 meters)
- Rotary Diameter: 53.7 ft (14.1 meters)
- Speed: 184 mph
- Maximum Takeoff Weight: 22,000 lbs
- Range: 450 nautical miles (unlimited with aerial refueling)
- Armament: Two 7.62mm miniguns
- Crew: Two officers (pilots); two enlisted (flight engineer and gunner)

Mission

The MH-60G's primary wartime missions are infiltration, exfiltration and resupply of special operations forces in day, night, or marginal weather conditions. Other missions include combat search and rescue. The MH-60G, a highly modified variant of the UH-60A Black Hawk, offers increased capability in range (endurance), navigation, communications, and defensive systems.

The MH-60G can be deployed to support a full range of special air warfare activities to include special operations, psychological operations, and civil affairs.

EQUIPMENT

Navigation Equipment

MH-60G navigation equipment includes:

- Integrated navigation computer system consisting of a ring-laser inertial navigation system
- Global positioning system
- Doppler navigation system
- TACAN
- KG-10 map display unit
- Weather avoidance radar

The MH-60G also includes a navigation system interfaced forward looking infrared (FLIR) system and a voice altitude warning system to provide enhanced terrain clearance operations. A Personnel Locator System (PLS) is installed to enhance locating and identifying ground forces for extraction.

Special/Auxiliary Equipment

- All the MH-60Gs have an automatic flight control system to stabilize the aircraft in typical flight altitudes. They also have instrumentation and engine and rotor blade anti-ice systems for all-weather operation.
- Internal cargo tie down rings, a rescue hoist, and an "H-bar" installation are standard equipment as insertion/extraction devices for hoist, fast rope, rappelling, stabo, and SPIE rig operations.
- The Pave Hawk can also be equipped with the external stores support system.
- To extend their range, the Pave Hawks are equipped with a retractable in-flight refueling probe and internal auxiliary fuel tanks. Pave Hawks are equipped with a rescue hoist with a 250-foot cable with a 600-pound capacity.
- External loads can be carried on an 8,000-pound capacity cargo hook. For shipboard operations and to ease air transportability Pave Hawks are equipped with folding rotor blades and tail stabilator.
- Communication systems include secure HF, UHF, HAVE QUICK UHF, and FM radios as well as SATCOM and digital data burst system.

Defensive Equipment

- ALQ-144 infrared countermeasures (IRCM) system
- Hover infrared suppression system
- improved flare and chaff dispensing systems

Defensive Armaments



MH-60G Covering the Pickup with its MiniGuns

Defensive armaments include a forward cabin-mounted 7.62mm miniguns firing either 2,000 or 4,000 rpm and cabin-mounted .50-cal machine guns. With the addition of the external stores support system (ESSS), the aircraft can carry fixed forward-firing armaments for use as a defensive and escort aircraft. Each ESSS wing can carry two 7 or 19-shot, 2.75-inch folding fin aerial rocket pods or dual 20mm cannons/.50-cal machine guns.

Employment

The MH-60G can be successfully employed in the low-to-medium threat environment. As the level of threat increases above this, the chance of detection will increase, decreasing the probability of success. The probability of success will also decrease as the total number of aircraft in the mission increase due to an increased chance of detection (i.e., larger multi-ship or dissimilar type formations). The requirement to operate from a Forward Area Arming and Refueling Point (FAARP) will also decrease the probability of success due to the extended exposure time.

The MH-60G will operate at low altitudes over land and water. The aircraft will normally be employed as part of a larger vertical-lift package, which may require dissimilar multi-ship formations. The MH-60G will operate into unprepared, unlighted, uncontrolled landing zones 50 meters or larger in diameter.

Deployment

The MH-60G can be deployed by airlift, sea-lift, or self-deployed. The preferred deployment option is airlift using a C-5, and is essential if rapid deployment is required. A C-5 can transport a maximum of five MH-60Gs. The aircraft can be broken down for shipment in less than 1 hour and off-loaded and rebuilt at the location in less than 2 hours. The optimum deployment package is four MH-60Gs via C-5. Due to the rapid tear down and buildup times, it is normally faster to air transport the aircraft rather than self-deploy when distances exceed 1,500 NM using aerial refueling, or 1,000 NM using ground refueling. Deployments can be worldwide using a main base or a limited/standby base with host support. Deployments can be conducted in a deceptive or low-visibility mode. The number of aircraft required and the time phasing after notification are specified in other sources. Self-deployment utilizing aerial refueling assets requirements are:

- One tanker aircraft, plus one spare, per four MH-60Gs.
- Two tanker aircraft, plus one spare, per six MH-60Gs or sea in marginal weather conditions using minimum/no communications.

Planning Considerations

The time required to adequately plan for a mission varies with the complexity and length of the mission (i.e., flight time, number of other aircraft, types of aircraft involved in the formation, threat, and location of the objective). As a general rule of thumb, comprehensive mission planning requires a minimum of 6 hours. Ideally, a tasking arrives while the crews are in crew rest, and primary mission planning is accomplished by unit mission planners. The crews arrive approximately 3 hours prior to their mission departure time and fine tune the planning.

Weather Minimums

The MH-60G is designed to operate in a variety of weather conditions. Due to the use of night optical devices (NVGs and FLIR) and color weather radar, the aircraft can operate in very low-visibility conditions with low cloud ceilings. However, the MH-60G is a visual meteorological conditions (VMC) platform with weather avoidance capability.

Fuel Endurance and Performance

Mission endurance is increased through the use of an air refueling probe for inflight aerial refueling. In addition, the aircraft can be ground refueled using pressure or gravity feed systems at forward area arming and refueling points (FAARPS) or onboard ships. The MH-60G has a choice of internal auxiliary fuel tanks for extended range operations. The aircraft can be equipped with either the single, 117-gallon tank, offering 3.3 hours of aircraft operations, or the dual, 185-gallon tanks, offering 4.5 hours of unrefueled operations.

Mission Effectiveness

Mission effectiveness is highly dependent upon accurate, complete, all-source, real-time intelligence. The MH-60G has weather avoidance radar, but this equipment does not replace the use of detailed, highly accurate, timely weather forecasts for pre-mission planning.

Troop/Aircraft Load Capacity

The aircraft is capable of transporting 12 combat-equipped troops in an alternate loading configuration without internal auxiliary fuel tanks. With internal fuel tanks installed, maximum troop capacity is 10, with an optimum load of 6.

Aircrew

Crew Qualification. Aircrews maintain qualification in night vision goggle (NVG) tactical operations, NVG aerial refueling, NVG shipboard operations, and NVG overwater operations to include rubber boat deployment ("low and slow"), fast rope infiltration, and hoist or rope ladder exfiltration. Standard Crew: 2 pilots, 2 flight engineers (or 1 flight engineer and 1 aerial gunner).



MH-60G Water Pickup

SPECIAL TACTICS TEAMS (STTs)

STTs are quick-reaction, deployable Air Force units, which are uniquely organized, trained, and equipped to facilitate the air/ground interface during joint special operations and sensitive recovery missions. The STTs are comprised of combat controllers, pararescue, and support personnel.

Mission

The special tactics mission is to provide the Joint Special Operations Air Component Commander (JSOACC) with quick-reaction command and control positive air traffic management, and casualty recovery, treatment and evacuation staging during joint air and ground/maritime operations including short notice, sensitive contingencies. Special tactics teams operate in a ground role with joint or combined special operations task forces.

Deployment

ST teams can be deployed by airlift, sea-lift or overland means. Airlift is the preferred method of deployment and is critical for time sensitive operations.

- One C-130 can deploy a single ST team and its associated equipment.
- Deployment can be worldwide to a main base or forward operating location. Teams will require host support at the deployed location.
- For deployment purposes, there are two basic special tactics team types; the tactical team and the recovery team. The tactical team consists of eighteen personnel while the recovery team contains nine. Once deployed, exact team composition and equipment can be tailored by the team leader to meet specific employment mission requirements.



Special Tactics Rescue All Terrain Vehicle (RATTV)

Employment

ST teams may be employed tactically directly from their home station into the area of operations. ST forces can be employed as stand-alone units or combined with other special operations forces into a joint team. ST teams may be employed using a variety of tactical methods including:

- Static line or military freefall parachute
- Scuba, small boat or amphibious means
- Overland using mounted or dismounted techniques
- Airland via fixed or rotary wing aircraft
- Airmobile procedures including, rope, ladder or STABO

A ST team is the basic tactical element for special tactics forces. The tactical team may be employed complete or broken into as many as six smaller elements. A special tactics recovery team is normally employed for specialized missions such as CSAR or personnel recovery. The recovery team may be employed complete or broken down into as many as three elements.

Specific Employment

ST teams can be deployed in support of the full range of special operations missions and collateral activities to include direct action, foreign internal defense, combat search and rescue, personnel/equipment recovery, humanitarian assistance, and civil affairs.

Mission Tasks

- Provide terminal guidance and air traffic control for assault zones (AZ). An AZ may be an established airfield, landing strip or unimproved site. The team can:
 - Establish ground-to-air communications.
 - Coordinate AZ activities with the ground force commander.
 - Perform weather observations. Provide positive control of personnel and equipment within the airhead area to include control of Forward Arming and Refueling Point (FARRP) operations.
- Select, evaluate, survey and establish AZs. The special tactics team can:
 - Clear, mark and operate the AZ
 - Establish enroute and terminal navigation aids and beacons
 - Conduct reconnaissance and surveillance missions
 - Support selected regional survey team (RST) missions
 - Remove obstacles to flight for follow-on operations
- Provide medical care, recovery and evacuation. The special tactics team can:
 - Provide combat emergency medical and trauma care
 - Operate specialized personnel locator systems
 - Operate combat medical evacuation vehicles
 - Conduct recovery security team operations
 - Conduct casualty transload and evacuation operations
 - Conduct sensitive recovery operations

- Conduct, coordinate, and plan fire support operations. The special tactics team can:
 - Control CAS aircraft
 - Control naval gunfire
 - Spot for artillery fire
 - Operate laser targeting equipment
- Conduct mobile training team operations. The team can provide training to allied or indigenous personnel in:
 - Assault zone, communications, and other special operations
 - Combat medical and related casualty treatment procedures
 - Other special tactics/operations related procedures
 - Conduct other special operations missions as directed

Basic Planning Considerations

- ST teams deploy with the minimum equipment and supplies needed to complete a mission. They are normally equipped to operate for up to 72 hours without resupply. Infiltrations or operations in excess of 72 hours will require resupply of consumables including additional equipment, batteries, fuel, water, and rations.
- Operations in excess of 72 hours or multiple special tactics taskings are considered sustained operations and a special tactics operation's center (STOC) must be deployed along with the employing tactical team(s). The STOC contains the additional command and planning staff and maintenance/logistics functions needed to support employed team(s). The STOC should be deployed to the nearest available staging or operations base with access to the tactical team's area of operations.



Motorcycles And ATV Vehicles Provide STS Personnel Rapid Mobility Throughout The Airfield Environment.

- Mission effectiveness is highly dependent upon accurate, complete, real-time intelligence. ST planners must have access to all intelligence sources.
- The time required for ST teams to prepare for a mission varies with the complexity and length of the mission. As a rule of thumb, a tactical team requires a minimum of 12 hours to provide adequate premission rest, conduct final planning, brief team members and ready equipment. Any preliminary mission planning or preparation time must be added to this 12-hour figure.

AVIATION FID

Aviation-FID training and advice include airpower doctrine development, force planning, and operational support as well as tactical employment in such mission areas as airlift, fighter operations, forward air control (FAC), SAR, special tactics (ST), and gunship operations. This assistance includes both rotary and fixed-wing aircraft. Assistance in aviation support operations includes aircraft maintenance, supply, logistics, airbase ground defense, munitions, ground safety, command and control, communications, intelligence, and risk management. Operations associated with aviation-FID include support for counterinsurgency and counterdrug operations. Additionally, the aviation FID squadron supports the following SO missions and collateral activities:

- **Unconventional Warfare (UW)**

The unit's task entails training and advising foreign aviation units to support partisan operations in occupied territory with aerial insertion, extraction, and resupply from a third-country sanctuary.

- **Coalition Support**

The unit's task entails supporting foreign aviation units with advisory assistance in such areas as operational and tactical planning, force integration, and mission execution. Coalition support includes advisory actions to:

- Promote safety and interoperability between US forces and coalition partners.
- Facilitate airspace deconfliction.
- Help integrate host aviation efforts into multi-national air campaign operations.
- Increase the tactical effectiveness of host-country aviation resources.
- Maintain vital coordination links between host-country aviation units and the Joint Force Air Component Commander (JFACC).

- **Humanitarian Assistance And Disaster Relief**

The unit's task includes advising and training host-nation aviation elements to conduct air operations supporting host government and multi-national humanitarian aid and disaster assistance programs.

Mission

The 6th Special Operations Squadron (6 SOS) is a combat advisory unit activated for the purpose of advising and training foreign aviation units to employ and sustain their own assets in both peace and war, and, when necessary, to integrate those assets into joint, multi-national operations. It supports the theater combatant commanders in three interrelated areas: foreign internal defense (FID), unconventional warfare (UW), and coalition support. The mission area also encompasses collateral activities such as humanitarian assistance and disaster relief.

Employment

When tasked, unit personnel deploy to a designated country, collocate with host-nation aviation elements at squadron, wing, or headquarters levels, and train and/or advise counterpart personnel in the employment and support of air operations. Training and advisory assistance is conducted at both the operational and tactical levels.

Planning Considerations

The basic unit deployment module for aviation advisory operations is an Operational Aviation Detachment-Alpha (OAD-A). When multiple OADs are deployed to the field, an OAD-B is also deployed as a headquarters, C3, and administrative support element. The teams are specially tailored in both size and composition to meet specific mission needs. A notional OAD-A consists of 12 personnel capable of teaching and/or advising in the functional areas shown below. A medic may bring the total strength of a notional OAD-A to 13 individuals.

Table 5-16. Aviation FID OAD-A Composition

OPERATIONAL AVIATION DETACHMENT (OAD)

ALPHA

TYPICAL FUNCTIONAL AREAS	NOTIONAL LOAD
• PILOTS	• 3 PILOTS
• AIRCREW (NON-PILOT)	• 3 MAINTENANCE
• MAINTENANCE	• 2 SPECIAL TACTICS
• SPECIAL TACTICS	• 2 AIRCREW
• COMMUNICATIONS	• 1 LOGISTICS
• LOGISTICS	• 1 SECURITY POLICE
• INTELLIGENCE	• 1 MEDIC (augmented resource)
• CIVIL AFFAIRS/PSYOP	• Augmented as required
	12 TOTAL(13 with medic)

A notional OAD-B contains 10 personnel to accomplish the support functions.

Table 5-17. Aviation FID OAD-B Composition

OPERATIONAL AVIATION DETACHMENT (OAD)

BRAVO

- TEAM LEADER/MISSION COMMANDER
 - OPERATIONS OFFICER
 - FLIGHT SURGEON (augmented resource)
 - MEDICAL TECHNICIAN (augmented resource)
 - COMMUNICATIONS SPECIALIST (augmented resource)
 - ADMINISTRATIVE SPECIALIST
 - MAINTENANCE OFFICER
 - LOGISTICS OFFICER
 - PLANS OFFICER
 - INTEL OFFICER
-

AIR MOBILITY COMMAND C-141 AND C-5 SOLL II



Mission

The C-141/C-5/C-17 SOLL II forces from the Air Mobility Command (AMC) are capable of conducting clandestine formation or single-ship intrusion of hostile territory to provide highly reliable, self-contained, precision airdrop and airland of personnel and equipment. The assumed mission concept will be day/night, low-level, without the use of external aids. Mission success is enhanced by minimum lighting, minimum communications, deceptive course changes, and preplanned

avoidance of enemy radar/air defenses and populated areas. Each aircraft is well-suited for many special operations applications due to their load-carrying capability, ability to operate into short austere runways, and their normal, known signature.

SOLL II Capabilities

- Crew consists of three pilots, two navigators, two loadmasters (4 loadmasters for a C-5 crew), and two flight engineers.
 - Minimum Flight Altitudes. Night VMC routes, legs or segments will be flown at 500 ft above the highest obstruction within three NM of route centerline.
 - Airland Operations. Landing zones may be marked with a minimum of NO LIGHTS or a Box In One. Weather minimums are VFR.



MH-6 Ready for Upload

Employment Operations

Due to OPSEC considerations, rapid response requirements, and/or lack of suitable forward operating bases, many C-141/C-5 SOLL II missions will require long-range employment flights. Necessary command and control communications will be accomplished by secure SATCOM and line-of-sight radios. Land-fall points are selected to minimize detection by hostile forces. Precise navigation positioning after extended overwater flights is required. On these long missions, it is imperative that both the aircrew and user's fatigue are minimized so human errors are reduced during critical phases of the mission, such as the low-level portion and objective area operations.

Planning Considerations

Table 5-18. C-141 and C-5 SOLL II Planning Considerations

MISSION	CRITERIA
Low-Level Infil/Exfil Operations	C-141/C-5 SOLL II forces are required to penetrate hostile or sensitive airspace under blacked out conditions either single-ship or in formation. Low-level routes are constructed to minimize detection. Strict navigational tolerances and terrain avoidance capabilities are critical factors for mission success. SOLL II forces will fly low-level route as high an altitude as the threat and other detection factors will allow.
Airdrop Operations	SOLLII forces will be utilized to conduct clandestine airdrops of personnel, supplies, and equipment into very small unmarked water and land DZs at night during blacked out conditions. These airdrops may be conducted either single ship, in formation, or in concert with other aircraft. Drops may be conducted at low altitudes (e.g., 300-1,500 ft AGL) or from the aircraft. Medium altitudes up to FL 250 SOLL II airdrops are typically conducted in a non-permissive ground threat environment and are required to be able to navigate to a precision airborne release point without the assistance of external aids. Due to ground threats and various OPSEC considerations, multiple passes on a DZ are not desirable due to adverse impact on mission success. Airdrops may be on unmarked drop zones or configured with covert visual markings. These airdrops may be conducted with or without NVGs, depending on the ground tactical situation. During visual airdrops, and while operating on NVGs, the pilots must be capable of independently determining aircraft altitude, airspeed, heading and course deviations, as well as visual formation position. SOLL II crews are also required to conduct clandestine, single pass, low altitude combination airdrops of boats and personnel.
Airland Operations	SOLL II forces are required to conduct self-contained precision approaches to minimum covert light conditions, and prepared or unprepared landing zones. While on approach, SOLL II aircrews must be capable of independently determining if the landing zone is clear of obstructions, which may be emplaced by hostile forces. Throughout the approach, and especially during the critical final phase, both pilots must be capable of independently determining the aircraft barometric and radar altitude, indicated airspeed, ground speed, aircraft descent rate, heading, and course deviations while operating on NVGs. The entire approach and landing must be accomplished without displaying any overt external lights.
Ground Operations	SOLL II forces must be capable of safe, rapid clandestine off/onloads of personnel, equipment, vehicles and other cargo without displaying any overt lights. Mission scenario may require the SOLL II forces to conduct blacked out hot refueling operations with other aircraft.

The nature of the missions listed above results in the C-141/C-5 SOLL II mission being highly dependent upon accurate, complete, all-source, real-time intelligence.

Crew Duty Day

- Basic Crew. Crew duty day varies for basic crews and augmented crews. Crew duty day for a basic crew is 16 hours, providing no tactical events and no air refueling is accomplished after 14 hours.
- Augmented Crew. Crew duty day for an augmented crew is 24 hours, providing no tactical events and no air refueling is accomplished after 18 hours.



AH-6J Taxiing to the C-5 for Upload

APPENDIX A

DEFINITIONS

AIR FORCE SPECIAL OPERATIONS COMMAND (AFSOC). Air Force Special Operations Command is the Air Force service component to US Special Operations Command.

AIR FORCE SPECIAL OPERATIONS FORCES (AFSOF). AFSOF is an umbrella term for Air Force forces that conduct and support special operations (SO).

AMBASSADOR. A diplomatic agent of the highest rank accredited to a foreign government or sovereign as the resident representative of his own government, also called the Chief of Mission. In the US system, the Ambassador is the personal representative of the President and reports to him through the Secretary of State.

ANTITERRORISM (AT). Defensive measures used to reduce the vulnerability of individuals and property to terrorism. Also called AT. See also Counterterrorism, Combating Counterterrorism, and Terrorism.

AREA ASSESSMENT. In unconventional warfare, the prescribed collection of specific information by the commander which commences immediately after infiltration and is a continuous operation. It confirms, corrects, refutes, or adds to previous intelligence acquired from area studies and other sources prior to infiltration.

AREA COMMAND. In unconventional warfare, the organizational structure established within a joint special operations area to command and control resistance forces. It consists of the area commander, his staff, and representatives of the resistance element, to include Special Forces after infiltration.

AREA ORIENTED. A term applied to personnel or units whose organizations, mission, training, and equipping are based upon projected operational deployment to a specific geographic area.

ARMY SPECIAL OPERATIONS COMMAND (ARSOC). ARSOC is a specific term, which may be used to refer to the Army component of a joint special operations command or task force.

ARMY SPECIAL OPERATIONS FORCES (ARSOF). ARSOF is an umbrella term for Army forces that conduct and support special operations (SO).

ASSET (Intelligence) (DOD, IADB). Any resource, person, group, relationship, instrument, installation, or supply - at the disposition of an intelligence organization for use in an operational or support role. Often used with a qualifying term such as agent asset or propaganda asset.

ATTACHE'. A person attached to the embassy in a diplomatic status who is not normally a career member of the diplomatic service. In the US system, attache's generally represent agencies other than the Department of State, (i.e., DoD, CIA, USIS).

BARE BASE (Air Operations). A base having a runway of minimum length and width constructed of matting or otherwise stabilized, to include taxiways, parking areas and a source of water. Other necessities required to operate under bare base conditions form a necessary part of the force package deployed to the bare base.

CAPABILITY. The ability to execute a specified course of action.

CHARGE D` AFFAIRS. An embassy official (normally the Deputy Chief of Mission or second highest ranking officer), who takes charge of the mission in the absence of the Ambassador.

CELL. Small group of individuals who work together for a clandestine or subversive purpose and whose identity is unknown by members of other cells within the overall organization.

CHIEF OF MISSION. The Chief of Mission is the senior diplomatic official at a diplomatic mission. In the US system, chiefs of missions have the diplomatic title of "Ambassador extraordinary and plenipotentiary" and are appointed by the President and confirmed by the Senate.

CHIEF OF STATION (CIA). The Chief of Stations is the official in charge of the US Central Intelligence Agency's (station) operations in a given foreign country. He or she usually has nominal "cover" of a regular diplomatic assignment.

CIVIL AFFAIRS (CA). The activities of a commander that establish, maintain, influence, or exploit relations between military forces and civil authorities, both governmental and nongovernmental, and the civilian populace in a friendly, neutral, or hostile area of operations in order to facilitate military operations and consolidate operational objectives. Civil affairs may include performance by military forces of activities and functions normally the responsibility of local government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of other military operations.

CIVIL MILITARY OPERATIONS (CMO). Group planned activities in support of military operations that enhance the relationship between the military forces and civilian authorities and population and which promote the development of favorable emotions, attitudes, or behavior in neutral, friendly, or hostile groups.

COALITION WARFARE. The combined effort of nations with common strategic interests to coordinate their war fighting capability for defense of those interests.

COLLATERAL MISSION ACTIVITIES. The inherent capabilities of all military forces may periodically be applied to accomplish missions other than those for which the forces are principally organized, trained, and equipped. Collateral activities in which special operations forces, by virtue of inherent capabilities, may be tasked to participate include humanitarian assistance, security assistance, search and rescue, counternarcotics, antiterrorism, and other security activities, and special activities. (USCINCSOC)

COMBAT RECOVERY. The act of retrieving resources while engaging enemy forces.

COMBAT SEARCH AND RESCUE (CSAR). A specific task performed by rescue forces to effect the recovery of distressed personnel during wartime or contingency operations.

COMBATING TERRORISM (CBT). Actions, including antiterrorism (defensive measures taken to reduce vulnerability to terrorist acts) and counterterrorism (offensive measures taken to prevent, deter, and respond to terrorism), taken to oppose terrorism throughout the entire threat spectrum.

COMBAT WEATHER TEAM. A team of Air Force personnel organized, and equipped to conduct critical weather observations from austere areas. These teams are trained to operate independently in a hostile environment.

COMBATANT COMMAND (COCOM). Nontransferable command authority established by title 10 (Armed Forces), United States Code, section 164, exercised only by commanders of unified or specified commands unless otherwise directed by the President or the Secretary of Defense. Combatant command (command authority) cannot be delegated and is the authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. Combatant command (command authority) should be exercised through the commanders of subordinate organizations. Normally, this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Combatant command (command authority) provides full authority to organize and employ commands and forces as the combatant commander considers necessary to accomplish assigned

COMMAND AND CONTROL WARFARE (C2W). The integrated use of operations security, military deception, psychological operations, electronic warfare, and physical destruction, mutually supported by intelligence, to deny information to influence, degrade, or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions. Command and control warfare is an application of information warfare in military operations and is a subset of information warfare. Command and control warfare applies across the range of military operations and all levels of conflict. C2W is both offensive and defensive: a. C2 attack. Prevent effective C2 adversary forces by denying information to, influencing, degrading, or destroying the adversary C2 system. b. C2-protect. Maintain effective command and control of own forces by turning to friendly advantage or negating adversary efforts to deny information to, influence, degrade, or destroy the friendly C2 system.

CONSULATE GENERAL/CONSULATE. A constituent post of an embassy in a foreign country located in an important city other than the national capital. Consulates General are larger than Consulates, with more responsibilities and additional staff.

CONVENTIONAL FORCES. Those forces that are capable of conducting operations using non-nuclear weapons. Also, those forces not specially trained, equipped, and organized to conduct special operations. (See also Special Operations)

COUNTERDRUG (CD). Those active measures taken to detect, monitor, and counter the production, trafficking, and use of illegal drugs.

COUNTERINTELLIGENCE (CI). Information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassinations conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorists activities.

COUNTERMINE (CM). To explode the main charge in a mine by the shock of a nearby explosion of another mine or independent explosive charge. The explosion of the main charge may be caused either by sympathetic detonation or through the explosive train and or firing mechanism of the mine.

COUNTERMINE OPERATION. In land mine warfare, an operation to reduce or eliminate the effects of mines or minefields.

COUNTERPROLIFERATION (CP). Counterproliferation refers to actions taken to seize, destroy, render safe, capture or recover weapons of mass destruction (WMD).

COUNTERTERRORISM (CT). Offensive measures taken by civilian and military agencies of the government to prevent, deter, and respond to terrorism. (JOINT Pub 1-02) The primary mission of special operations forces in this interagency activity is to apply specialized capabilities to preclude, pre-empt, and resolve terrorist incidents abroad. (USCINCSOC)

COUNTRY TEAM. Generally, the ranking representatives of embassy sections and other US government agencies operating in the country. (i.e., CIA, AID, USIS). Chaired by the Ambassador or the Chief of Mission, the country team meets on a regular basis to advise the Ambassador on what the United States is, or should be doing and to review current developments in the country.

COVERT OPERATIONS. Operations, which are so, planned and executed as to conceal the identity of, or permit plausible denial by the sponsor. They differ from clandestine operations in that emphasis is placed on concealment of identity of sponsor rather than on concealment of the operations. In special operations, an activity may be both covert and clandestine.

DECEPTION. Those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react in a manner prejudicial to his interests.

DECONFLICT. To reconcile or resolve a conflict in interests as in targeting.

DENIAL OPERATION. An operation designed to prevent or hinder enemy occupation of, or benefit from, areas or objects having tactical or strategic value.

DEPARTMENT OF STATE. The US version of a Foreign Office or Ministry of Foreign Affairs and the home office of the departments of foreign service. The State Department is directed by the Secretary of State and advises the President in the formulation and execution of foreign policy.

DEPUTY CHIEF OF MISSION. The Deputy Chief of Missions is the senior diplomatic official in an embassy below the rank of ambassador. The incumbent has the diplomatic title of Minister, Minister-Counselor or Counselor depending upon the size of the mission and is nearly always a career Foreign Service officer.

DIRECT ACTION (DA). Short-duration strikes and other small scale offensive actions by Special Operations Forces to seize, destroy, or inflict damage on a specified target; or to destroy, capture, or recover designated personnel or material. In the conduct of these operations, Special Operations Forces may employ raid, ambush, or direct assault tactics; emplace mines and other munitions; conduct standoff attacks by fire from air, ground, or maritime platforms; provide terminal guidance for precision guided munitions; and conduct independent sabotage.

ELECTRONIC COUNTER-COUNTERMEASURES. That division of electronic warfare involving actions taken to ensure friendly effective use of the electromagnetic spectrum despite the enemy's use of electronic warfare.

ELECTRONIC COUNTERMEASURES. That division of electronic warfare involving actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum. Also called ECM.

ELECTRONIC WARFARE (EW). Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. The three major subdivisions within electronic warfare are electronic attack, electronic protection, and electronic warfare support. a. electronic attack (EA). That division of electronic warfare involving the use of electromagnetic, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability. EA includes: 1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception, and 2) employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams). b. electronic protection (EP). That division of electronic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability. c. electronic warfare support (ES). That division of electronic warfare involving actions tasked by, or under direct control of, and operational commander to

search for, intercept, identify, and locate sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition. Thus, electronic warfare support provides information required for immediate decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Electronic warfare support data can be used to produce signal intelligence, both communications intelligence and electronics intelligence.

ESSENTIAL ELEMENTS OF FRIENDLY INFORMATION (EEFI). Key positions likely to be asked by adversary officials and intelligence systems about specific friendly intentions, capabilities, and activities, so they can obtain answers critical to their operational effectiveness.

ESSENTIAL ELEMENTS OF INFORMATION (EEI). The critical items of information regarding the enemy and the environment needed by the commander by particular time to relate with other available information and intelligence in order to assist in reaching a logical decision.

EVASION AND ESCAPE (E&E). The procedures and operations whereby military personnel and other selected individuals are enabled to emerge from an enemy-held or hostile area to areas under friendly control.

EVASION AND RECOVERY (E&R). The full spectrum of coordinated actions carried out by evaders, recovery forces, and operational recovery planners to effect the successful return of personnel isolated in hostile territory to friendly control.

EMBASSY. Technically, the Ambassador's residence, but commonly used to refer to the offices of a diplomatic mission. Also, a permanent diplomatic establishment of the highest rank, headed by an ambassador.

EMERGENCY RESUPPLY. Resupply mission fully planned prior to insertion of SOF into the operating area. Occurs on schedule should radio contact not be established, or once established, is lost between the main base and the operating team.

EXFILTRATION. The removal of personnel or units from areas under enemy control.

FOREIGN INTELLIGENCE. Information relating to the capabilities, intentions, and activities of foreign powers, organizations, or persons, but not including counterintelligence, except for information on international terrorist activities.

FOREIGN INTERNAL DEFENSE (FID). The participation by civilian and military agencies of a government in any of the action programs taken by another government to free and protect its society from subversion, lawlessness, and insurgency. The primary role of Special Operations Forces in this interagency activity is to train, advise, and otherwise assist host nation military and paramilitary forces.

FOREIGN NATION SUPPORT. Civil resource identification, negotiation, and procurement from available resources within a foreign nation in support of the US military mission during wartime, preparation for war, or peacetime.

FORWARD ARMING AND REFUELING POINT (FARRP). A temporary facility, organized, equipped, and deployed by an aviation commander, and normally located in the main battle area closer to the area of operation than the aviation unit's combat service area, to provide fuel and ammunition necessary for the employment of aviation maneuver units in combat. The forward arming and refueling point permits combat aircraft to rapidly refuel and rearm simultaneously. Also called FARRP. In special operations, a FARRP is often quickly and clandestinely established to support a single operation, frequently in hostile or denied territory. Once its mission is served, it is as quickly dismantled, preferably without leaving signs of its presence.

FORWARD OPERATIONAL BASE (FOB). In special operations, a base usually located in friendly territory or afloat, which is established to extend command and control or communications or to provide support for training and tactical operations. Facilities are usually temporary; they may include an airfield or an unimproved airstrip, an anchorage, or a pier. The FOB may be the location of a special operations component headquarters or a smaller unit that is supported by a main operations base.

FORWARD OPERATING LOCATION (FOL). A temporary base of operations for small groups of personnel established near or within the JSOA to support training of indigenous personnel or tactical operations. The FOL may be established to support one or a series of missions. Facilities are austere; they may include an unimproved airstrip, a pier, or an anchorage. A main operational base or a forward operations base may support the FOL.

HUMANITARIAN ASSISTANCE (HA). Assistance provided by DoD forces, as directed by appropriate authority, in the aftermath of natural or man-made disasters to help reduce conditions that present a serious threat to life and property. Assistance provided by US forces is limited to scope and duration and is designed to supplement the efforts of civilian authorities who have primary responsibility for providing such assistance.

HOST NATION. A nation in which representatives or organizations of another state are present because of government invitation or international agreement. The term particularly refers to a nation receiving assistance relevant to its national security.

HUMAN INTELLIGENCE (HUMINT). A category of intelligence derived from information collected and provided by human sources.

INFILTRATION.

a. The undetected movement through or into an area or territory occupied by either friendly or enemy troops or organizations. The movement is made either by small groups or by individuals at extended or irregular intervals. When used in connection with the enemy, it infers that contact is avoided.

b. In intelligence usage, placing an agent or other person in a target area in hostile territory. Usually involves crossing a frontier or other guarded line. Methods of infiltration are black (clandestine); gray (through legal crossing point but under false documentation); white (legal).

c. A technique and process in which a force moves as individuals or small groups over, through, or around enemy positions without detection.

INFORMATION. 1. Facts, data, or instructions in any medium or form. 2. The meaning that a human assigns to data by means of the known conventions used in their representation.

INFORMATION OPERATIONS (IO). Actions taken to affect adversary information and information systems while defending one's own information and information systems.

INFORMATION WARFARE (IW). Information operations conducted during time of crisis or conflict to achieve or promote specific objectives over a specific adversary or adversaries.

INTELLIGENCE REPORTING. The preparation and conveyance of information by any means. More commonly, the term is restricted to reports as the collector prepares them and as they are transmitted by him to his headquarters and by this component of the intelligence structure to one or more intelligence-producing components. Thus, even in this limited sense, reporting embraces both collection and dissemination. The term is applied to normal and specialist intelligence reports.

JOINT CHIEFS OF STAFF. Staff within the Department of Defense, which consists of the Chairman, who is the presiding officer thereof but who has no vote; the Chief of Staff, United States Army; the Chief of Naval Operations; the Chief of Staff, United States Air Force; and the Commandant, United States Marine Corps. The Joint Chiefs of Staff are the principal military advisers to the President, the National Security Council, and the Secretary of Defense.

JOINT DOCTRINE. Fundamental principles that guide the employment of forces of two or more Services of the same nation in coordinated action toward a common objective. It is ratified by all four Services and may be promulgated by the Joint Chiefs of Staff.

JOINT FORCE COMMANDER (JFC). A general term applied to a combatant commander, subunified commander, or a joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force.

JOINT FORCE SPECIAL OPERATIONS COMPONENT COMMANDER (JFSOCC). The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of special operations forces and assets, planning and coordinating special operations, or accomplishing such operational missions as may be assigned. The joint force special operations component commander is given the authority necessary for the accomplishment of missions and tasks

assigned by the establishing commander, up to and including operational control. The joint force special operations component commander will normally be the commander with the preponderance of special operations forces and possessing requisite command and control capabilities.

JOINT SPECIAL OPERATIONS AREA (JSOA). A restricted area of land, sea, and airspace assigned by a joint force commander to the commander of a joint special operations force to conduct special operations activities. The commander of joint special operations forces may further assign a specific area or sector within the joint special operations area to a subordinate commander for mission execution. The scope and duration of the special operations forces mission, friendly and hostile situation, and politico-military considerations all influence the number, composition, and sequencing of special operations forces deployed into a joint special operations area. It may be limited in size to accommodate a discrete direct action mission or may be extensive enough to allow continuing a broad range of unconventional warfare operations

JOINT SPECIAL OPERATIONS TASK FORCE (JSOTF). A joint task force composed of special operations units from more than one service, formed to carry out a specific special operation or prosecute special operations in support of a theater campaign or other operations. The joint special operations task force may have conventional nonspecial operations units assigned or attached to support the conduct of specific missions.

JOINT TASK FORCE (JTF). A joint force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint task force commander.

MAIN OPERATIONAL BASE (MOB). A designated base established by a theater Special Operations Command, Joint Special Operations Task Force, or a component force in friendly or neutral territory which provides sustained command and control, administration, and logistics to support operations in designated areas, including forward operational bases and forward operating locations.

MILITARY CIVIC ACTION. The use of preponderantly indigenous military forces on projects useful to the local population at all levels in such fields as education, training, public works, agriculture, transportation, communications, health, sanitation, and others contributing to economic and social development, which would also serve to improve the standing of the military forces with the population. (US forces may at times advise or engage in military civic action in overseas areas.)

MOBILE SEA BASE. An afloat base composed of command and barracks facilities, small craft repair ships, and logistics support ships, which provide support as a base of operations from which a sea force can launch and conduct sea warfare.

MOBILE TRAINING TEAM (MTT). A team consisting of one or more US military or civilian personnel sent on temporary duty, often to a foreign nation, to give instruction. The mission of the team is to train indigenous personnel to operate, maintain, and employ weapons and support

systems, or to develop a self-training capability in a particular skill. The National Command Authorities may direct a team to train either military or civilian indigenous personnel, depending upon host nation requests.

NATIONAL COMMAND AUTHORITIES (NCA). The President and the Secretary of Defense or their duly deputized alternates or successors.

NATIONAL OBJECTIVES. The aims, derived from national goals and interests, toward which a national policy or strategy is directed and efforts and resources of the nation are applied.

NATIONAL POLICY. A broad course of action or statements of guidance adopted by the government at the national level in pursuit of national objectives.

NATIONAL SECURITY. A collective term encompassing both national defense and foreign relations of the United States. Specifically, the condition provided by:

- a. A military or defense advantage over any foreign nation or group of nations.
- b. A favorable foreign relations position.
- c. A defense posture capable of successfully resisting hostile or destructive action from within or without, overt or covert.

NATIONAL STRATEGY. The art and science of developing and using the political, economic, and psychological powers of a nation, together with its armed forces, during peace and war, to secure national objectives.

NAVAL SPECIAL OPERATIONS COMMAND (NAVSOC). NAVSOC is a specific term, which may be used to refer to the Navy component of a joint special operations command or task force.

NAVAL SPECIAL OPERATIONS FORCES (NAVSOF). NAVSOF is an umbrella term for Naval forces that conduct and support special operations (SO).

NAVAL SPECIAL WARFARE (NSW). Encompasses that set of naval operations generally accepted as being non-conventional in nature, in many cases covert or clandestine in character. They include utilization of specially trained forces assigned to conduct unconventional warfare, psychological operations, beach and coastal reconnaissance, operational deception operations, counterinsurgency operations, coastal and river interdiction, and certain special tactical intelligence collection operations which are in addition to those intelligence functions normally retained for planning and conducting specific operations in a hostile environment.

NAVAL SPECIAL WARFARE GROUP (NSWG). A permanent Navy echelon III major command to which most naval special warfare forces are assigned for some operational and all administrative purposes. It consists of a group headquarters with command and control, communications, and support staff; sea-air-land teams, and sea-air-land team delivery vehicle teams. The group is the source of all deployed naval special warfare forces and administratively supports the naval special warfare units assigned to the theater combatant commanders. The group staff provides

general operational direction and coordinates the activities of its subordinate units. A naval special warfare group is capable of task-organizing to meet a wide variety of requirements.

NAVAL SPECIAL WARFARE TASK GROUP (NSWTG). A provisional naval special warfare organization that plans, conducts, and supports special operations in support of fleet commanders and joint force special operations component commanders.

NAVAL SPECIAL WARFARE UNIT (NSWTU). A provisional subordinate unit of a naval special warfare task group.

OPERATIONAL CONTROL (OPCON). Transferable command authority which may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of the military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinated joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to assign missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

PSYCHOLOGICAL OPERATIONS (PSYOP). Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign government, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives.

PSYCHOLOGICAL WARFARE. The planned use of propaganda and other psychological actions having the primary purpose of influencing the opinions, emotions, attitudes, and behavior of hostile foreign groups in such a way as to support the achievement of national objectives.

SABOTAGE. An act or acts with intent to injure, interfere with or obstruct the national defense of a country by willfully injuring or destroying, or attempting to injure or destroy, any national defense or war material, premises, or utilities, to include human and natural resources.

SEARCH AND RESCUE (SAR). The use of aircraft, surface craft, submarines, specialized rescue teams and equipment to search for and rescue personnel in distress on land or at sea.

SECRETARY OF STATE. The senior member of the President's cabinet and the US equivalent of Foreign Minister, he is the President's chief foreign policy spokesman and heads the Department of State.

SECURITY ASSISTANCE. Group of programs authorized by the Foreign Assistance Act of 1961, as amended, and the Arms Export Control Act of 1976, as amended, or other related statutes by which the United States provides defense articles, military training, and other defense-related services, by grant, credit, or cash sales, in furtherance of national policies and objectives.

SECURITY ASSISTANCE ORGANIZATIONS (SAO). Encompasses DoD elements located in foreign countries with assigned security assistance responsibilities. They may be known as joint US military advisory groups, joint US military groups, US military missions, US military advisory groups, US military assistance advisory groups, or US military groups. Security assistance organizations also include defense liaison offices or groups, defense field offices, offices of defense cooperation, and defense attaché offices with personnel designated to perform security assistance functions. The specific title of a SAO is dependent on the number of persons assigned, the functions performed, or the desires of the host nation.

SPECIAL ACTIVITIES (SA). Activities conducted in support of national foreign policy objectives, which are planned and executed so that the role of the United States government is not apparent or acknowledged publicly. They are also functions in support of such activities, but are not intended to influence United States political processes, public opinion, policies, or media and do not include diplomatic activities or the collection and production of intelligence or related support functions.

SPECIAL BOAT SQUADRON (SBR). A permanent Navy echelon III major command to which two or more special boat units are assigned for some operational and all administrative purposes. The squadron is tasked with the training and deployment of these special boat units and may augment naval special warfare task groups and task units.

SPECIAL BOAT UNIT (SBU). Those US Navy forces organized, trained, and equipped to conduct or support naval special warfare, riverine warfare, coastal patrol and interdiction, and joint special operations with patrol boats or other combatant craft designed primarily for special operations support.

SPECIAL FORCES (SF). US Army forces organized, trained, and equipped specifically to conduct special operations. SF has five primary missions: unconventional warfare (UW), foreign internal defense (FID), direct action (DA), special reconnaissance (SR), and counterterrorism (CT). Counterterrorism is a special mission for specifically organized, trained, and equipped special forces units designated in theater contingency plans.

SPECIAL FORCES GROUP (SFG). A combat arms organization capable of planning, conducting, and supporting special operations activities in all operational environments in peace, conflict, and war. It consists of a group headquarters and headquarters company, a support company, and special forces battalions. The group can operate as a single unit, but normally the battalions plan and conduct operations from widely separated locations. The group provides general operational direction and synchronizes the activities of its subordinate battalions. Although structured for unconventional warfare, special forces group units are capable of task-organizing to meet specific requirements.

SPECIAL FORCES OPERATIONAL BASE (SFOB). A command, control, and support base established and operated by a special forces group or battalion from organic and attached resources. The base commander and his staff coordinate and synchronize the activities of subordinate and forward-deployed forces. The special forces operations base is normally established for an extended period of time to support a series of operations.

SPECIAL OPERATIONS (SO). Operations conducted by specially organized, trained, and equipped military and paramilitary forces to achieve military, political, economic, or psychological objectives by unconventional military means in hostile, denied, or politically sensitive areas. These operations are conducted during peacetime competition, conflict, and war, independently or in coordination with operations of conventional, nonspecial operations forces. Political-military considerations frequently shape special operations, requiring clandestine, covert, or low visibility techniques, and oversight at the national level. Special operations differ from conventional operations in degree of physical risk, operational techniques, mode of employment, independence from friendly support, and dependence on detailed operational intelligence and indigenous assets.

SPECIAL OPERATIONS COMMAND (SOC). A subordinate, unified or other joint command established by a joint force commander to plan, coordinate, conduct, and support joint special operations within the joint force commander's assigned area of operations.

SPECIAL OPERATIONS LIAISON ELEMENT (SOLE). A special operations liaison team provided by the joint force special operations component commander to the joint force air component commander (if designated) to coordinate, deconflict, and integrate special operations air and surface operations with conventional air.

SPECIAL OPERATIONS LOW LEVEL (SOLL). USAF strategic and tactical airlift SOLL crews are trained to perform specialized low-level flight. SOLL II is a NVG landing, airdrop, and low-level flight capability, with avionics upgrades in designated aircraft.

SPECIAL OPERATIONS WEATHER TEAM/TACTICAL ELEMENT (SOWT/TE). A task organized team of Air Force personnel organized, trained, and equipped to collect critical weather observations from data sparse areas. These teams are trained to operate independently in permissive or semi-permissive environments, or as augmentation to other special operations elements in nonpermissive environments, in direct support of special operations.

SPECIAL RECONNAISSANCE (SR). Reconnaissance and surveillance actions conducted by special operations forces to obtain or verify, by visual observation or other collection methods, information concerning the capabilities, intentions, and activities of an actual or potential enemy, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area. It includes target acquisition, area assessment, and post-strike reconnaissance.

SPECIAL TACTICS TEAM (SST). Special Tactics Team comprised of Air Force combat controllers and pararescuemen specifically organized, trained and equipped to control aviation assets and

provide combat search and rescue, trauma care, and evacuation staging of the wounded. In addition, combat controllers trained in Special Operations Terminal Attack Control (SOTAC) conduct terminal guidance of fire support delivered by fixed and rotary wing aircraft.

STRATEGIC INTELLIGENCE. (DOD) Intelligence that is required for the formation of policy and military plans at national and inter-national levels. Strategic intelligence and tactical intelligence differ primarily in level of application but may also vary in terms of scope and detail.

STRATEGIC PSYCHOLOGICAL ACTIVITIES. (DoD, NATO) Planned psychological activities in peace and war, which normally pursue objectives to gain the support and cooperation of friendly and neutral countries and to reduce the will and the capacity of hostile or potentially hostile countries to wage war.

TACTICAL CONTROL (TACON). Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and usually, local direction and control of movements or maneuvers, necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command.

TERMINAL GUIDANCE. 1. The guidance applied to a guided missile between midcourse guidance and arrival in the vicinity of the target. 2. Electronic, mechanical, visual, or other assistance given an aircraft pilot to facilitate arrival at, operation within or over, landing upon, or departure from an air landing or airdrop facility.

TERRORISM. The calculated use of violence or threat of violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological.

UNCONVENTIONAL WARFARE (UW). UW is a broad spectrum of military and paramilitary operations, normally of long duration, predominantly conducted by indigenous or surrogate forces that are organized, trained, equipped, supported, and directed in varying degrees by an external source. It includes guerrilla warfare and other direct offensive, low visibility, covert or clandestine operations, as well as the indirect activities of subversion, sabotage, intelligence collection, and evasion and escape.

US COUNTRY TEAM. The senior, in-country, United States coordinating and supervising body, headed by the Chief of the United States diplomatic mission, usually an ambassador, and composed of the senior member of each represented United States department or agency. (See also Country Team.)

WEAPONS OF MASS DESTRUCTION (WMD). In arms control usage, weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Can be nuclear, chemical, biological, and radiological weapons, but excludes the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon.

APPENDIX B

GLOSSARY

ABN	Airborne
ACC	Area Component Commander; Air Combat Command
ACE	Aviation Combat Element
ADCON	Administrative Control
ADE	Aerial Delivery Equipment
AFRES	Air Force Reserve
AFSOB	Air Force Special Operations Base
AFSOC	Air Force Special Operations Command/Component
AFSOD	Air Force Special Operations Detachment
AFSOD/E	Air Force Special Operations Detachment or Element
AFSOF	Air Force Special Operations Forces
AMC	Air Mobility Command; Army Materiel Command
ANG	Air National Guard
AO	Area of Operations
AOB	Advanced Operational Base
AOC	Air Operations Center (Capable)
AOR	Area of Responsibility
ARNG	Army National Guard
ARRS	Aerospace Rescue and Recovery Squadron
ARSOA	Army Special Operations Aviation
ARSOC	Army Special Operations Command
ARSOF	Army Special Operations Forces
ARSOTF	Army Special Operations Task Force
ASD (SO/LIC)	Assistance Secretary of Defense for Special Operations and Low-Intensity Conflict
ASDS	Advanced Sea-Air-Land (SEAL) Delivery System
ASG	Area Support Group
AT	Antiterrorism
AVN	Aviation
BDA	Battle Damage Assessment
BDE	Brigade
BN	Battalion
BSSG	Brigade Service Support Group
BUD/S	Basic Underwater Demolition/Sea-Air-Land

C2	Command and Control
C3	Command, Control and Communications
C3I	Command, Control, Communications, and Intelligence
C4I	Command, Control, Communications, Computers, and Intelligence
C4I2	Command, Control, Communications, Computers, Intelligence, and Interoperability
CA	Civil Affairs
CAB	Civil Affairs Battalion
CAMPS	Computer Aided Mission Planning System
CAP	Combat Air Patrol
CAS	Close Air Support
CBR	Chemical, Biological and Radiological
CBT	Combating Terrorism
CCT	Combat Control Team
CD	Counterdrug
CE	Command Element
CG	Commanding General
CI	Counterintelligence
CINC	Commander-in-Chief
CJTF	Commander, Joint Task Force
CM	Countermine
CM&D	Collection Management and Dissemination
CMO	Civil-Military Operations
CMOTF	Civil-Military Operations Task Force
COA	Course of Action
COCOM	Combatant Command
COMAFSOC	Commander, Air Force Special Operations Command
COMSEC	Communications Security
COMSOC	Commander, Special Operations Command
COMSOCCENT	Commander, Special Operations Command Central
COMSOCEUR	Commander, Special Operations Command Europe
COMSOCKOR	Commander, Special Operations Command Korea
COMSOCPAC	Commander, Special operations Command Pacific
COMSOCSOUTH	Commander, Special Operations Command South
CONOPS	Concept of Operations
CONUS	Continental United States
COS	Chief of Staff
COSCOM	Corps Support Command
CP	Counter Proliferation
CRRC	Combat Rubber Raiding Craft
CS	Combat Support
CS/CSS	Combat Support/Combat Service Support
CSAR	Combat Search and Rescue
CSSE	Combat Service Support Element

CT	Counterterrorism
DA	Direct Action
DDS	Dry Deck Shelter
DET	Detachment
DFT	Deployments for Training
DOD	Department of Defense
DODD	Department of Defense Directive
DOS	Department of State
DS	Direct Support
DZ	Drop Zone
E&E	Evasion and Escape
E&R	Evasion and Recovery
EA	Emergency Action
ECCM	Electronic Counter-Countermeasures
ECM	Electronic Countermeasures
EEFI	Essential Elements of Friendly Information
EEI	Essential Elements of Information
ELINT	Electronic Intelligence
EMCON	Emissions Control
EOB	Electronic Order of Battle
EOD	Explosive Ordnance Disposal
ESM	Electronic Warfare Support Measures
EW	Electronic Warfare
FARRP	Forward Arming and Refueling Point
FID	Foreign Internal Defense
FOB	Forward Operational Base
FOL	Forward Operating Location
FPB	Fast Patrol Boat
GPF	General Purpose Forces
GPS	Global Positioning System
GS	General Support
GW	Guerrilla Warfare
HA	Humanitarian Assistance
HAHO	High Altitude High Opening
HALO	High Altitude Low Opening
HF	High Frequency
HN	Host Nation
HNS	Host Nation Support
HRS	Humanitarian Relief Service

HQ	Headquarters
HSLLDAS	High Speed Low Level Aerial Delivery System
HUMINT	Human Intelligence
IRCM	Infrared Countermeasures
IRR	Immediate Ready Reserve
ISB	Intermediate Staging Base
ISE	Intelligence Support Element
JASORS	Joint Advanced Special Operations Radio System
JCET	Joint Combined Exchange for Training
JCMOTF	Joint Civil-Military Operations Task Force
JCS	Joint Chiefs of Staff
JCSE	Joint Communications Support Element
JFACC	Joint Force Air Component Commander
JFC	Joint Force Commander
JFLCC	Joint Force Land Component Commander
JFMCC	Joint Force Maritime Component Commander
JFSOCC	Joint Force Special Operations Component Commander
JOC	Joint Operations Center
JP	Joint Publication
JPOTF	Joint Psychological Operations Task Force
JOPES	Joint Operations Planning and Execution System
JPOTG	Joint Psychological Operations Task Group
JRCC	Joint Rescue Coordination Center
JSCP	Joint Strategic Capabilities Plan
JSOA	Joint Special Operations Area
JSOACC	Joint Special Operations Air Component Commander
JSOC	Joint Special Operations Command
JSOSE	Joint Special Operations Support Element
JSOTF	Joint Special Operations Task Force
JTF	Joint Task Force
KTS	Knots
MATC	Mini Armored Troop Carrier
MCCT	Mobile Command Communications Team
METL	Mission Essential Task List
MFP	Major Force Program
MI	Military Intelligence
MTG	Master Training Guide
MTT	Mobile Training Team
NAB	Naval Amphibious Base
NAS	Naval Air Station

NAVSOC	Navy Special Operations Command
NAVSOFF	Navy Special Operations Forces
NAVSPECWARCEN	Naval Special Warfare Center
NAVSPECWARCOM	Naval Special Warfare Command
NAVSPECWARDEVGRU	Naval Special Warfare Development Group
NCA	National Command Authorities
NCC	Naval Component Command
NEO	Noncombatant Evacuation Operation(s)
NM	Nautical Miles
NOD	Night Observation Devices
NOSG	Naval Operations Support Group
NR	Naval Reserve
NRF	Naval Reserve Force
NSW	Naval Special Warfare
NSWG/U	Naval Special Warfare Group or Unit
NSWTG	Naval Special Warfare Task Group
NSWU	Naval Special Warfare Unit
NVG	Night-Vision Goggles
OCONUS	Outside the Continental United States
OPCON	Operational Control
OPLAN	Operation Plan
OPSEC	Operational Security
OSC	Operational Support Company
PB	Patrol Boat
PBL	Patrol Boat Light
PBR	Patrol Boat, Riverine
PC	Patrol Coastal
PDB	PSYOP Dissemination Battalion
POB/C	PSYOP Battalion or Company
POC	Point of Contact
POG	Psychological Operations Group
POG(A)	Psychological Operations Group (Airborne)
PR	Personnel Recovery
PSYADS	PSYOP Dissemination System
PSYOP	Psychological Operations
RATTV	Rescue All Terrain Vehicle
R&S	Reconnaissance and Surveillance
RGT	Regiment
RGR	Ranger
RIB	Rigid Inflatable Boat
ROK	Republic of Korea
ROKN	Republic of Korea Navy

RSB	PSYOP Regional Support Battalion
RSC	PSYOP Regional Support Company
RSE	Ranger Support Element
SA	Security Assistance
SAO	Security Assistance Office
SATCOM	Satellite Communications
SBR	Special Boat Squadron
SBS	Special Boat Squadron
SBU	Special Boat Unit
SCI	Sensitive Compartmented Intelligence or Information
SCIF	Sensitive Compartmented Information Facility
SCUBA	Self-Contained Underwater Breathing Apparatus
SDV	Sea-Air-Land (SEAL) Delivery Vehicle
SDVT	SEAL Delivery Vehicle Team
SEABEE	Navy Construction Battalion Personnel
SEAL	Sea-Air-Land Team
SFG	Special Forces Group
SFG(A)	Special Forces Group (Airborne)
SFOB	Special Forces Operational Base
SFOD	Special Operation Detachment
SIG	Signal
SIGINT	Signal Intelligence
SJA	Staff Judge Advocate
SO	Special Operations
SOA	Special Operations Area; Special Operations Aviation
SOAG	Special Operations Aviation Group
SOC	Special Operations Command; Special Operations Capable
SOCACOM	Special Operations Command, Atlantic Command
SOCC	Special Operations Control Center
SOCCE	Special Operations Command and Control Element
SOCCENT	Special Operations Command, Central Command
SOCEUR	Special Operations Command, Europe
SOCKOR	Special operations Command, Korea
SOCOORD	Special Operations Coordination Element
SOCOM	Special Operations Command
SOC PAC	Special Operations Command, Pacific
SOC SOUTH	Special Operations Command, South
SOF	Special Operations Forces
SOG	Special Operations Group (USAF)
SOLE	Special Operations Liaison Element
SOLL	Special Operations Low Level
SOS	Special Operations Squadron
SOTF	Special Operations Task Force
SOW	Special Operations Wing

SOWT	Special Operations Weather Team
SPTCONF	Support Confirmation
SPTREQ	Support Request
SR	Special Reconnaissance
STT	Special Tactics Team
TF	Task Force
TF/TA	Terrain Following/Terrain Avoidance
THREATCON	JCS Terrorist Threat Condition
TIP	Target Intelligence Package
TOA	Transfer of Authority
TOC	Tactical Operations Center
TOS	Theater Operating System
TOT	Time on Target
TSB	PSYOP Tactical Support Battalion
TSC	PSYOP Tactical Support Company
TTP	Tactics, Techniques, and Procedures
UCP	Unified Command Plan
UDT	Underwater Demolition Team
UHF	Ultra-High Frequency
USAID	United States Agency for International Development
USASOC	United States Army Special Operations Command
USCINCOM	Commander-in-Chief, US Atlantic Command
USCINCPAC	Commander-in-Chief Pacific Command
USCINCSOC	Commander-in-Chief, US Special Operations Command
USDR	United States Defense Representative
USEUCOM	United States European Command
USPACOM	United States Pacific Command
USIA	United States Information Agency
USSOCOM	United States Special Operations Command
UW	Unconventional Warfare
VHF	Very High Frequency
VLS	Vertical Launch System
WMD	Weapons of Mass Destruction

APPENDIX C

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