MACR 55-54

MILITARY AIRLIFT COMMAND REGULATION

OPERATIONS

MAC HELICOPTER OPERATIONS

20 DECEMBER 1986

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS MILITARY AIRLIFT COMMAND

DEPARTMENT OF THE AIR FORCE
Headquarters Military Airlift Command
Scott Air Force Base, Illinois 62225-5001

MAC REGULATION 55-54

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MAC HELICOPTER OPERATIONS

Establishes procedures for the operation of all helicopters employed by Military Airlift Command (MAC) to accomplish its worldwide missions. It provides the most acceptable policies and procedures for most circumstances, but does not replace sound judgment. This publication applies to Air National Guard and US Air Force Reserve units and memebers.

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Chapter 1

GENERAL INFORMATION

1-1. General:

a. This is a single source command directive for helicopter aircrews. Use it in conjunction with aircraft flight manuals, FLIP, and applicable USAF directives. It is written for normal and contingency operations to minimize requirements for procedural changes at the onset of contingencies. Procedures for the training environment are included.

b. The Directorate of Aircrew Standardization/Evaluation (DOV) has overall responsibility for administration of this regulation.

1-2. Applicability. All 23 AF units. References to 23 AF units/personnel/ aircraft in this regulation include all MAC-gained 23 AF forces unless specifically exempted by NGB, AFRES, or this regulation, as appropriate.

1-3. Terms Explained:

a. "Will and shall" indicate a mandatory requirement.

b. "Should" indicates non-mandatory desired or preferred method of accomplishment.

c. "May" indicates an acceptable or suggested means of accomplishment.

d. WARNING: Operating procedures, techniques, etc., which may result in personal injury or loss of life if not carefully followed.

e. CAUTION: Operating procedures, techniques, etc., which may result in damage to equipment if not carefully followed.

f. NOTE: Operating procedures, techniques, etc., which are essential to emphasize.

1-4. Deviations. The authority for this regulation is HQ MAC/DO. Do not deviate from the policies and guidance in this regulation except:

a. For safety.

b. If beyond command and control communications capability, aircraft commanders may deviate from this directive as necessary to protect their crew and aircraft. Report all deviations without waiver through channels to HQ MAC/DOV, NGB/XO, or HQ AFRES/DO, as appropriate, within 30 days of occurrence.

c. When circumstances require modification of prescribed procedures. Although this publication provides guidance for helicopter operations under most circumstances, it is not a substitute for sound judgment.

d. When waived by the appropriate authority as specified within this regulation. The NAF/CC is the waiver authority for crew complement/management policies (chapter 3) and command operating restrictions (Chapter 4). The NAF/CC may delegate his authority to the ALD/CC, COMALF/CC, or COMAFSOB for operationally assigned forces. Request waivers through normal command and control channels.

1-5. Supplements. The only portion of this regulation authorized to be supplemented is chapter 10. Units will publish operating procedures as a supplement (IAW AFR 5-8) to chapter 10. Title this supplement to indicate the unit concerned; for example, "71 ARRS Operating Procedures." Unit operating procedures will not duplicate, alter, or amend the provisions of this regulation. No other supplement to this regulation is authorized.

1-6. Requisitioning Procedures. Units will requisition this regulation through their servicing PDO. PDOs will consolidate unit requirements within their area of responsibility. Annex A may be requisitioned separately. Requisitions for additional copies will contain a statement of justification; that is, fair wear and tear, unit activation, increase of personnel, etc. Distribution to units, organizations, and individuals outside 23 AF and 23 AF-gained ARF units may be made upon specific request, with justification, through their MAJCOM PDMs.

1-7. Revisions. Personnel at all echelons are encouraged to submit proposed changes. Send recommended changes IAW AFR 60-9, as supplemented, through command channels to HQ MAC/DOV. DOV at each intermediate level will coordinate on the recommended changes prior to sending to the next higher level of command.

1-8. Format. The table of contents is arranged to be standard with other weapon systems MAC 55-series regulations. Chapters and/or paragraphs not applicable to the helicopter mission are labeled as "not used." Some paragraphs are reserved for future use.

1-9. Distribution. The distribution within 23 AF/ARF units will be:

Commanders 23 AF/ARF Units, All Levels	1
Operational File (Operations Section) All Levels	1
FCIF	1
Rescue Coordination Centers	1
Staff Operations Officers All Levels	1
Mission Coordinator Kits	1
Mission Navigations Kits	1
Aircrew	1

1-10. Development of New Equipment and Procedures. Units are encouraged to suggest new equipment, methods, and procedures. Headquarters 23 AF/NGB/AFRES and HQ MAC approval must be obtained prior to the testing of new procedures or equipment.

1-11. Definitions:

ABORT. To turn back from, or cut short, a mission before its successful completion, for reasons other than enemy action. This may occur after an aircraft is airborne or on the ground before takeoff.

ADDITIONAL CREWMEMBER (ACM). An additional crewmember is one assigned in addition to the normal aircrew complement required for a mission for purposes of performing flight evaluations, supervising and/or monitoring inflight procedures.

AERIAL GUNNER (AG). All references to AG are used to indicate an airborne gunner. AGs normally fly on special operations helicopters.

AIR FORCE RESCUE COORDINATION CENTER (AFRCC): The purpose of the AFRCC is to coordinate SAR operations in the 48 contiguous States. Specific tasks and responsibilities of the AFRCC are:

a. To coordinate all available resources for search and rescue assistance to persons in distress.

b. To verify request for SAR assistance to preclude unjustified use of forces and interference with private enterprise.

c. To determine the composition of forces, the assignment of tasks, the designation of objectives, and make decisions relative to prosecution of the mission.

d. To coordinate and direct the activities of 23 AF forces which have been committed by Command authority.

e. To forward valid requests for 23 AF resources to the appropriate Command authority for approval.

f. To coordinate directly with 23 AF units tasked by their Command authority; pass mission information and ensure objective and assignment are clearly understood.

g. To prevent overcommitment of assets and hazardous congestion on scene. For this reason, all SAR forces must keep the AFRCC informed on their SAR activity.

h. Depending on the magnitude and complexity of the mission, the AFRCC either will function as the SAR mission coordinator, or designate a member of a tasked unit to serve as the SAR mission coordinator. The AFRCC also will appoint an onscene commander. When operating on a mission with other military or civil agencies, one member of a 23 AF unit will be designated to control the activities of 23 AF forces and coordinate with other agencies.

AIR RESERVE FORCES (ARF). Air National Guard and/or Air Force Reserve forces.

AIRCREW PREFLIGHT TIME. That time at which the aircrew reports to the aircraft to commence preflight inspection.

ALERT AIRCRAFT. An operationally ready aircraft specifically designated to be launched IAW timing factors established for the assigned missions with a ready crew available.

ATTACHED CREWMEMBER. Any crewmember whose primary duty assignment is other than line flying, who is attached to a specific unit for flying.

AVAILABLE CREW. Operationally qualified aircrew which has completed the allotted ground time since completion of a mission and can be available for aircrew duty within one hour.

BACKUP AIRCRAFT. Any aircraft, ready, available and unassigned, which may be substituted for the assigned aircraft for specific missions.

BASIC AIRCREW. Minimum number of crew personnel required to man an aircraft for an operational mission.

BINGO. When an aircraft passes over the landing zone or ground party.

BINGO FUEL. The computed fuel remaining at a point in flight that will allow safe return to the point of intended landing.

BORDER CLEARANCE. Those clearances and inspections required to comply with Federal, State, and Agricultural Customs, Immigration and Immunization requirements.

CHALK NUMBER. Numerical position of each wingman in the formation, i.e., "two, three, four."

COMMAND AND CONTROL. An arrangement of personnel and facilities, plus the means of acquisition, processing and dissemination of information, used by a command in planning, directing and controlling operations.

COMMAND AND CONTROL CENTER (CCC). An agency used by a commander to direct, control, and coordinate operations. Each CCC provides supervision, guidance, and control within its assigned area of responsibility. CCCs include the MAC Command Center, Operations Center (OCs), Command Posts (CPs), Airlift Control Centers (ALCCs), Airlift Coordination Centers (ACCs), Airlift Control Elements (ALCEs), Combat Control Teams (CCTs), Air Force Reserve Command Center, NGB Field Support Center, and ARF Wing/Group OCs/CPs. Additional CCCs may be established, if required, to support specific operations.

COMMAND POST/OPERATIONS CENTER (CP/OC). A central (focal) point used by a commander and his or her representatives to direct operations. It is organized and equipped to gather, analyze, process, and present operational data as required and to perform other related functions as determined by the commander.

CONTINGENCY MISSION. A mission operated in direct support of an OPLAN, operation order, disaster or emergency.

CREW COMPLEMENT. The number of crew personnel used for a specific mission.

CREW DUTY TIME. See paragraph 3-11.

DELAY. A delay occurs when the mission departs after scheduled departure time.

DEPARTURE MESSAGE. An operational immediate message containing operational planning data, with respect to a mission of a MAC aircraft, electrically transmitted to specified addressees.

DEPARTURE TIME. The time an aircraft becomes airborne, or is scheduled to take off.

DESIGNATED COURIER. A commissioned or warrant officer in the United States Armed Forces (except a noncommissioned warrant officer of the United States Navy) or a specifically designated Department of State courier, who is in travel status and traveling via military aircraft to the same destination as the material. Such an individual will be designated by a courier transfer station. In addition, a commissioned or warrant officer referred to above, who can present current official written evidence of a TOP SECRET clearance or a specifically designated Department of State courier, may be designated to convey such material by means other than military aircraft to pointe other

than a courier transfer station. A medical officer or a chaplain will not be designated as a courier to convey courier material requiring armed guard protection.

DESTINATION STATION. Base at which a mission terminates as reflected in the operational directive or OPLAN and the mission identifier is changed.

DIVERSION. Operational term for the inflight diversion of a mission from its point of intended landing to any other airport. Diversion is differentiated from a reroute in that a diversion is effected during flight.

DEVIATION. A deviation for MAC purposes occurs when:

a. The takeoff time is greater than 0.2 hours (14 minutes) after scheduled takeoff time.

b. The takeoff time is greater than 0.3 hours (20 minutes) prior to scheduled takeoff time.

DOLLS. Delayed Opening Leaflet System.

EVALUATION FLIGHT. A mission during which the techniques and procedures of crewmembers are noted, measured against required standards, and recorded.

EXTENDED OVERWATER FLIGHT. Flight beyond the navigation aid/communications receiving capability of the aircraft.

FORWARD AREA REFUELING POINT (FARP). A ground site dssignated for quick refueling/rearming.

FLIGHT ADVISORY. Message issued to a pilot concerning any factor that might affect the successful completion of a mission.

FLIGHT ENGINEER. All references to flight engineer include the term flight mechanic, when applicable.

FLIGHT PROGRESS. Maintaining positive command and control over the airborne movement of an aircraft on a given route segment to include the capability to establish communications to deliver advisories concerning safety of fligbt and issue diversion or recall instructions when required.

FORWARD OPERATING LOCATION (FOL). A landing area used as a staging site.

GUNSHIP. Helicopter configured with various weapons.

GROUND TIME. Time aircraft is on the ground from arrival at blocks to takeoff.

HAZARDOUS CARGO/MATERIALS. Explosive, toxic, caustic, nuclear, combustible or flammable, biologically infectious or poisonous materials that may directly or indirectly endanger human life or property, particularly if misused, mishandled, or involved in accidents (AFRs 55-14, 71-4; TO 11N-20-11).

INITIAL POINT (IP). A point near drop zones, landing zones, or extraction zones over which final course alterations are made to arrive at tbe specified zone.

INTERMITTENT OR TEMPORARY WEATHER CONDITIONS. The definition of these two terms can be considered synonymous for aircrew use. They describe the weather (cloud coverage and height, visibility, and winds, including gusts) that is expected to exist for short periods of 30 minutes or less and forecast to occur less than one-half of the forecast period.

LANDING ZONE (LZ). An area of sufficient size to allow discharge or pick-up of personnel/equipment by touchdown or hover.

LATN. Low altitude tactical navigation.

MANIFEST. Movement record of traffic airlifted on aircraft operated by, for, or under the control of the Air Force.

MED EVAC. Medical evacuation.

MINIMIZE. A procedurs for reducing message traffic on common user teletype and telephone circuits during emergencies. (AFR 700-11)

MISSION CAPABLE CREWS/CREWMEMBERS. Crews/crewmembers qualified and current in accordance with AFR 51-2/MACSUP 1 to perform some portion of the unit mission, but who do not maintain mission ready status.

MISSION FOLLOWING. Monitoring the location and status of aircraft and crews through the use of departure, arrival, and advisory messages.

MISSION READY CREWS/CREWMEMBERS. Crews/crewmembers fully qualified and current IAW AFR 51-2/MACSUP 1 to perform the unit mission.

MISSION TIME. The time from which a crewmember reports to operations for a mission until that time at which the crewmember returns to home station, debriefs, and is properly relieved from duty. Airframe mission time is computed from block out at home station until block in at home station.

OCR. Office of Corollary Responsibility.

OPR. Office of Primary Responsibility.

OPERATIONAL CONTROL. Authority to direct accomplishment of a mission. The planning, routing, scheduling, and control of operating missions is called movement control.

OPERATIONALLY READY AIRCRAFT. An aircraft which is capable of flight with all required equipment operable to carry out the primary assigned mission.

PATCH. On-call patch provides temporary direct communications between tributary stations of the communications network. Aerospace aeronautical phone patch service provides direct voice communications between a ground agency and an aircraft.

REFUELING SORTIE. Refueling activity, including rendezvous.

RESCUE COORDINATION CENTER. Regional centers to coordinate rescue and recovery operations.

SAR. Search and Rescue.

SOF. Special Operations Forces.

STATION TIME. A specified time at which aircrew, passengers, and material are to be in the aircraft and prepared for flight. Passengers will be seated and loads tied-down. Aircrews will have completed briefing and aircraft preflight inspection prior to station time. Normally, station time will be 30 minutes prior to takeoff time (45 minutes H-53, 20 minutes H-1).

TERMINATION STATION. The final destination of a mission which may or may not be the home station of the aircraft.

TWILIGHT. The periods of incomplete darkness following sunset and before sunrise. Civil twilight is designated when the center of the sun is six degrees below the celestial horizon, about 24-28 minutes before/after sunrise/sunset.

VIP. VERY IMPORTANT PERSON. Military passengers, including those of friendly nations, of star, flag rank, or equivalent status to include diplomats, cabinet members, and members of Congress. Others may be designated as VIPs due to their mission or position by the agency of the Department of Defense authorizing the individual's travel. BLUE BARK passengers are handled as VIP by MAC (MACR 76-1, volume I).

WINCHESTER. Depletion of munitions.

ZAP ZONE. An area of maximum exposure to enemy fire. Flight through this area should be as rapid as possible.

Chapter 2

COMMAND AND CONTROL

2-1. General. Command and control of MAC-assigned forces is exercised through command and control centers (CCCs) which may consist of the HQ MAC Command Center, MAC NAF operations centers (OCs), airlift control centers (ALCCs), unit command posts (CPs), airlift coordination centers (ACCs), rescue coordination centers (RCCs), airlift control elements (ALCEs), combat control teams (CCTs), and Air Force special operations bases (AFSOBs). They are forces. All MAC aircraft, regardless of location, are under the control of a CCC.

2-2. Operational Control of MAC Helicopters. Operational control of rescue, special operations, missile support helicopters, and ARF helicopters on MAC mission identifiers are exercised as follows:

a. CINCMAC-Assigned Rescue and Special Operations Forces. CINCMAC retains command, including mobilized ARF forces. Operational command is exercised through 23 AF/CC and subordinate unit commanders. Operational control is exercised by the 23 AF OC. The 23 AF OC is responsible for all missions within the CONUS except those in the local flying area. Changes to itineraries of missions in progress or urgent mission requirements will be coordinated with and approved by 23 AF/DOC.

b. Theater-Assigned Rescue and Special Operations Forces. CINCMAC by the theater/joint task force (JTF) commander. Operational control is exercised as follows:

(1) Rescue. Operational control is exercised through Commander, Combat Rescue Forces, when formed, and by the theater RCC for aircraft participating in actual search and rescue (SAR) missions. For aircraft operating away from home station on non-SAR missions, the unit commander will exercise their operational control. Commanders must work closely with ALCCs, keeping them informed of mission changes and coordinating witb off-station aircrews through them whenever feasible.

(2) Special Operations. The Commander, Air Force Special Operations Forces, when formed, exercises operational control of special operations forces through the AFSOB. When AFSOBs are not formed, unit commanders exercise operational control. Unless special OPSEC considerations are required, SOF unit commanders should exercise their operational control through theater ALCCs in the same manner as described in paragraph 2-2b(1) for non-SAR rescue aircraft.

c. Operational command and control of missile support helicopters is exercised by the individual unit commander. When operating out of the local flying area, 23 AF OC will exercise operational control.

d. For missions in the local flying area, operational control is vested in the parent unit and is exercised by the local MAC command post/ACC, if available.

e. Operational control during exercises, contingencies, or war may transfer to other commanders as specified in the MAC OPLAN/OPORD.

2-3. MAC Mission Commander. A mission commander may be required to conduct specific deployment, employment, or redeployment activities in conjunction with contingency, exercise, training, or other operations. There are two types of mission commanders:

a. MAC Mission Commander (MAC MC). Designated by CINCMAC, NAF commander, theater COMALF, or AFSOB commander, the MAC MC is delegated command authority to exercise operational control over assigned operational and mission support forces, in order to attain specified mission objectives during large-scale or high-visibility operations and exercises. The MAC MC is a direct representative of the designating commander. He is responsible for planning, coordinating, and executing the operation and, through the MAC command and control system, directs mission support forces as required, within the limits of the designating commander's authority.

b. Airborne Mission Commander (AMC). An AMC may be designated by any level of command, down to and including the squadron level. He is assigned MAC operational forces with which to conduct specified operations of limited scale or duration. His authority to direct MAC forces does not extend beyond that of the designating commander. The AMC is responsible for planning, coordinating, and executing the flying mission. The AMC does not direct either fixed or deployed mission support forces, except those assigned specifically to support his mission. AMCs may be designated to conduct missions at the direction of a MAC mission commander.

c. For missions involving more than one 23 AF unit, the 23 AF/CC will designate a mission commander.

2-4. Aircraft Commander Responsibility and Authority. An aircraft commander is designated on all flights on the MAC Form 41, Flight Authorization, in accordance with AFR 60-1/MACSUP 1. Aircraft commanders are:

a. In command of all persons aboard the aircraft.

b. Responsible for the welfare of the crew and the safe accomplishment of the mission. This begins upon notification of the mission and terminates upon mission completion.

c. Vested with the authority necessary to manage their crew and accomplish the mission.

d. The final mission authority and will make decisions not specifically assigned to higher authority.

e. The final authority for asking for and accepting any waiver affecting their crew or mission.

f. Charged with keeping the applicable commander informed concerning mission progress and/or difficulties.

2-5. Mission Clearance Decision. The final decision to delay a mission may be made either by the CCC or the aircraft commander when, in the opinion of either, conditions are not safe to start/continue a mission. Final responsibility for the safe conduct of the mission rests with the aircraft commander. If the aircraft commander refuses a mission, it will not depart until the conditions have been corrected or improved so that the mission can operate safely.

a. Rerouting/Diverting and Airlift Mission. Diversions or rerouting of airlift mission must be authorized by the commander with operational control of the mission,

through the CCC, except in an emergency, or when required by en route or terminal weather conditions or facilities.

(1) A CCC coordinating the rerouting or diversion is responsible for ensuring the aircraft is compatible with departure, en route, and destination requirements/facilities.

(2) The aircraft commander will notify the CCC of any aircraft or aircrew limitations that may preclude diversion or rerouting of the mission.

b. When coordinating an aircraft diversion, the CCC will ensure the aircraft commander is provided existing and forecast weather for the alternate airfield. If the planned alternate is unsuitable upon arrival at destination, the CCC will advise the aircraft commander of other suitable alternates. The CCC will coordinate with appropriate agencies to prepare for the aircraft's arrival.

2-6. Aircrew Responsibilities. The aircraft commander is the focal point for interaction between aircrew and mission support personnel. The CCC is the focal point for all required mission support activities. Therefore, the aircraft commander must provide information on any factor which may affect mission accomplishment. This interdependency requires an open two-way flow of information between the aircraft commander and the CCC. At stops without a MAC CCC, it is the responsibility of the aircraft commander to ensure control system. The aircraft commander will establish a point of contact with the CCC prior to going into crew rest.

2-7. Operational Command and Control Reporting for 23 AF Aircraft. The 23 AF OC is responsible for monitoring subordinate unit aircraft movements. The 23 AF rotary-winged assets assigned to the 20 SOS, Det 1/2 AD, 41 ARRS, 55 ARRS, and 67 ARRS (HH-53s only) will be reported through the existing MAIRS network (MACR 55-3, volume III), or through the Global Decision Support System (GDSS). However, some modifications are required to protect certain mission movements primarily involving special operations assets. These MAIRS/GDSS reporting procedures require the cooperation of all MAC Command and Control Centers (CCC), mission planners, and 23 AF aircrews.

a. Procedures have been developed for reporting four types of 23 AF aircraft movements:

(1) Unclassified missions which transit bases where MAC Command and Control facilities exist.

(2) Unclassified missions which transit bases where no MAC CCCs exist.

(3) J-coded missions operating through bases as described in paragraphs a and b, above.

(4) Highly sensitive mission movements.

b. Procedures for each situation follow:

(1) Unclassified missions where MAC facilities exist: Thirty (30) minutes prior to landing, if feasible, aircraft commanders will relay the following data to the MAC CCC—call sign, mission number, estimated time of arrival (ETA), maintenance status, and additional service requirements. After landing, the aircraft commander will contact the CCC, coordinate ground handling requirements, and will provide departure information. MAIRS/GDSS information will be input by the MAC CCC. At locations where MAC Command and Control facilities and 23 AF units are collocated, the MAC CCC will input MAIRS/GDSS data, providing the 23 AF organization has no direct access to MAIRS/GDSS via computer.

(2) Unclassified operations at bases where no MAC CCC exists: Aircraft commander will relay the same data as in paragraph b(1), above, via HF phone patch, AUTOVON, or commercial telephone to the central reporting agency for the region of operations:

Area	Central Reporting Agency	Telephone-AUTOVON (A)/ Commercial (C)/Telex (T)
European, Middle East, and North African Area	322 ALD/ALCC Ramstein AB GE	A-314-480-5921 C-06371-475921 T-451659
Pacific Area	834 ALD/ALCC Hickam AFB HI	A-315-421-5001 C-808-449-1724 T-NA
Central/South America Area	61 MAG/ALCC Howard AB PN	A-313-284-3512 C-011-507-84-3512 T-NA
Alaskan Area	616 MAG/ALCC Elmendorf AFB AK	A-317-552-2533 C-907-753-3518 T-26-447
Korea	Korean ALCC Osan AB ROK	A-315-284-4600 C-NA T-NA
CONUS and all other areas	23 AF OC Scott AFB IL	A-576-5481 C-1-800-851-7542 Ext 5841 T-NA

The above facilities will be responsible for MAIRS/GDSS data input. After departure, the aircraft commander will pass call sign, mission number, departure time, next destination, and ETA to the central reporting agency.

(3) J-Coded Missions. When operating J-coded missions, the aircraft commander will ensure movement information is provided. Mission operating directives (MOD) will specify submission procedures. Command and control centers will submit movement reports only at the direction of the aircraft commander.

(4) Highly Sensitive Missions. These missions may operate without AIMS/MAIRS/GDSS submissions. The MOD will specify requirements.

c. Command and control centers will provide other C2 services such as logistics, weather, computer flight plan (if available), and routing assistance upon aircrew request.

2-8. Possee Comitatus Act. The Posse Comitatus Act is the policy of the Department of Defense to cooperate with civilian law enforcement officials to the maximum extent practicable (DOD Directive 5525.5, 22 Mar 82). Air Force Regulation 55-35 incorporates that directive and provides uniform policies and procedures to be followed concerning support provided to federal, state, and local civilian law enforcement agencies. It establishes specific limitations and restrictions on the use of Air Force personnel, equipment, facilities, and services by civilian law enforcement organizations. It is applicable to all Air Force members, military and civilian, and all organizations at all levels of command. The Posse Comitatus Act is viewed as having no effect outside of the United States (reference AFP 110-3). This prohibition does not extend to the employment of federal military forces in protecting property or federal officials against violence or forcible obstruction of their functions, or in time of war or national emergency in guarding war materials, vital utilities, industries, and installations. Report all requests for assistance and coordinate all requeste from civilian law enforcement authorities through the appropriate command and control channels.

Chapter 3

CREW COMPLEMENT/MANAGEMENT

3-1. **Aircrew Qualification.** Primary crewmembers or those occupying a primary position during flight must be qualified and current, or in training for qualification, in that crew position and mission. Only fully operational or special mission qualified and current crewmembers should be designated as primary crewmembers on operational or special missions. (For ARF, all MAC guidance on scheduling restrictions, crew duty time, crew rest, ground time, standby duty, alert activity, and flight duty activity appiles only when operating on MAC mission identifiers. Otherwise, AFR 60-1 and ARF supplements apply.)

a. Pilots:

(1) Operational and Operational Training Missions. Training of unqualified pilots is authorized during operational missions under the supervision of an instructor or flight examiner, so long as a qualified pilot to man the crew position is on board the aircraft. (EXCEPTION: Not applicable in aircraft requiring only one pilot to perform the mission.) On operational training missions (i.e., exercise and exercise deployments) noncurrent or unqualified pilots may perform crew duties under the supervision of a current instructor or flight examiner. Pilots unqualified for mission items may perform functional check flights (FCFs).

(2) Local Training and Evaluation Missions. Noncurrent or unquallfied pilots may perform crew duties under the supervision of a current instructor or flight examiner during local training flights.

b. Other noncurrent or unqualified crewmembers may perform in their primary crew position on any mission when under direct supervision of a qualified instructor or flight examiner in the respective crew position. Crewmembers noncurrent or unqualified for mission items may perform FCFs.

c. Flight surgeons and medical technicians may fly in their specialty in all 23 AF aircraft. Flight surgeon and medical technician assigned/attached to 23 AF unit will comply with AFR 60-1 and AFR 51-2, MACSUP 1, for quallfication and training.

3-2. **Crew Complement.** The minimum crew (qualification as indicated) for aircraft and mission is as specified below:

a. H-1:

(1) FCF (see NOTES 1 and 2):

(a) Aircraft commander.

(b) Copilot, flight engineer, fight mechanic, or qualified helicopter mechanic on hazardous duty pay is required to occupy the copilot seat. Unit commander or designated representative concurrence is required when a copilot is not used.

(c) Other personnel, as required, to flight check aircraft indicators, systems, and subsystems.

(2) All other flights (see NOTES 5 and 6).

(a) Aircraft commander.

(b) Copilot (EXCEPTION: 37 ARRS - when the detachment commander determines the use of a second pilot would result in mission degradation or unit manning is prohibitive, a support mission crew of one pilot may be authorized. These one-pilot missions are authorized for initial takeoff/departure before sunrise or termination approach or landing after sunset at home base provided all landings or takeoffs at support sites are made during daylight and VMC conditions.

(c) Flight Engineer (not applicable for 37 ARRS except for the following conditions: a flight mechanic is required when conducting hoist training/operations, a flight mechanic or 5-level or higher helicopter mechanic is required for all flights landing outside of the local flying area). (Not applicable for the TH-1F flights at 1550 CCTW except when conducting hoist training.)

(d) Other crewmembers, as required, to provide a complete crew for mission being flown. For search and rescue or alert, medical personnel (medical technician, flight surgeon, pararescueman, or competent medical personnel) are required. (EXCEPTION: Det 24, 40 ARRS at Cusik FOL.) Two tactically qualified crewmembers are required for scanning during low level operations.

NOTE: When passengers or cargo are carried with cabin doors open, a crewmember will be in the cabin. If a pilot is used, the pilot will be in addition to the minimum crew.

b. H-3:

(1) FCF (see NOTE 1):

(a) Aircraft commander.

(b) Copilot (see NOTE 2).

(c) Flight engineer.

(d) Other personnel, as required, to flight check aircraft systems and subsystems.

(2) Search and Rescue or Alert (see NOTE 5):

(a) Aircraft commander.

(b) Copilot.

(c) Flight engineer.

(d) Pararescueman (2) or adequate medical personnel to support mission being flown if pararescueman not assigned (NOTES 3 and 5).

(3) Operational and Special Missions (MARS, Pararescue Deployment, etc.):

(a) Aircraft commander.

(b) Copilot.

(c) Flight engineer.

(d) Other crewmembers, as required, to provide complete crew (qualified) for mission being accomplished.

(4) Ferry/Cross-Country:

(a) Aircraft commander.

(b) Copilot.

(c) Flight engineer.

(5) Training (see NOTE 5):

(a) Aircraft commander.

(b) Copilot (EXCEPTION: May be unqualified providing aircraft commander is at least instructor qualified.)

(c) Flight engineer.

(6) Augmented Crew (see NOTE 4):

(a) Aircraft commander (2).

(b) Copilot.

(c) Flight engineer (2).

c. H-53:
(1) FCF (see NOTE 1):
(a) Aircraft commander.
(b) Copilot (see NOTE 2).
(c) Flight engineer.
(d) Other personnel, as required, to flight check aircraft systems and subsystems.
(2) Search and Rescue or Alert (see NOTE 5):
(a) Aircraft commander.
(b) Copilot.
(c) Flight engineer.
(d) Pararescueman (2) (NA for SOF units) (see NOTE 3).
(e) Other crewmembers, as required, to provide complete crew for mission being flown.
(3) Other Operational and Special Missions (Pararescue Deployment, etc.):
(a) Aircraft commander.
(b) Copilot.
(c)Flight engineer.
(d) Other crewmembers, as required, to provide complete crew for mission being flown.
(4) Ferry:
(a) Aircraft commander.
(b) Copilot.
(c) Flight engineer.
(5) Training (see NOTE 5):
(a) Aircraft commander.
(b) Copilot (EXCEPTION: Copilot may be unqualified providing aircraft commander is at least instructor qualified.)
(c) Flight engineer.
(d) Other personnel, as required, to provide complete crew for mission being flown.
(6) Augmented Crew (sse NOTE 4).
(a) Aircraft commander (2).
(b) Copilot.
(c) Flight engineer (2).
d. H-60A:
(1) FCF (see NOTE 1):
(a) Aircraft commander.
(b) Copilot (see NOTE 2).
(c) Flight engineer.
(d) Other personnel, as required, to flight check aircraft systems and subsystems.
(2) Search and Rescue or Alert (see NOTE 5):
(a) Aircraft commander.
(b) Copilot.
(c) Flight engineer.
(d) Pararescueman (2) (see NOTE 3).
(3) Operational and Special Missions:
(a) Aircraft commander.
(b) Copilot.
(c) Flight engineer.
(d) Other crewmembers, as required, to provide complete (qualified) crew for mission being accomplished.
(4) Ferry:
(a) Aircraft commander.
(b) Copilot.
(c) Flight engineer.
(5) Training (see NOTE 5):
(a) Aircraft commander.
(b) Copilot (EXCEPTION: May be unqualified provided aircraft commander is at least instructor qualified.)
(c) Flight Engineer.

NOTE 1: Unit commanders must designate FCF crewmembers in writing. A letter of designation must be maintained in both operations and maintenance. When designated crewmembers are not available, other highly qualified crewmembers may be designated by the commander or his representative on the MAC Form 41, Flight Authorization.

NOTE 2: When possible, FCF copilots should be aircraft commander qualified. This, however, does not preclude designation of a highly qualified copilot when an aircraft commander is not available.

NOTE 3: The unit commander may authorize the use of one pararescueman per aircrew when manning, mission, and crew duty requirements dictate.

NOTE 4: One additional aircraft commander qualified pilot and one flight engineer are required to augment the crew complement specified for the type mission.

NOTE 5: NVG minimum crew for continuation training and operational missions.
a. One pilot and one copilot.
b. Engineer.
(1) H-1/3/60, one. (EXCEPTION: for H-3 NVG flight where pilot initial qualification or requalification training/evaluation is being conducted, an additional NVG qualified flight engineer or pilot will occupy the flight engineer's seat.)
(2) H-53, two.
c. Scanners: all aircraft, one; two scanners are required for H-53 missions involving formation or remote landings.

NOTE 6: Crewmembers must be qualified for the mission/maneuvers being flown. On training flights, copilots may be unqualified provided the aircraft commander is at least instructor qualified. Det 2, 67 ARRS, aircraft commanders and copilots must be theater qualified to fly on VIP support missions. If a theater qualified VIP is the aircraft commander, the copilot need not be theater qualified. Thirty-Seventh ARRS aircraft commanders must be remote qualified.

3-3. Additional Crewmembers (ACM). Applicable to ARF only when operating on a 23 AF mission identifier.
a. Policy Governing ACM Authorization. An ACM is one assigned in addition to the normal aircrew complement required for a mission. ACM status granted under this paragraph is applicable only to 23 AF aircraft operating in accordance with this regulation. Twenty-Third AF flying organization commanders may authorize ACM status to eligible personnel assigned or attached to that organization. Commanders authorized to approve ACM status will ensure it is not used to provide transportation in lieu of travel as a passenger or to provide transportation at a higher priority than would be enjoyed as a passenger. ACM will not be authorized to personnel on leave or PCS status. ACM will not be approved for the purpose of providing monetary benefit or avoiding travel expense. ACM status will not be authorized to maintain currency. Personnel granted ACM status will fly only with aircrews assigned to the organization that authorizes the ACM status.
b. Logging of Flying Time. Other than flight examiners, personnel traveling as ACM are not necessarily

entitled to log flying time. Flying time may be logged at the discretion of the aircraft commander, but never at the expense of an assigned crewmember's time. Flight surgeon, flight medical officers, flight nurses, and medical technicians may log time in accordance with AFR 60-1.

c. Briefings. The aircraft commander or representative will brief all ACMs covering emergency procedures, emergency egress and assistance required during emergency conditions. The extent of the briefing will be commensurate with the qualification of the ACM in that design aircraft.

d. Security Clearance. All ACMs will possess a security clearance appropriate to the mission being performed.

e. Orders. Authority to travel as ACM will be cited in the travel orders and must include the crew position for which the individual is qualified, the operational function to be performed inflight, and the routes to be flown. Personnel not qualified in any crew position, in accordance with MACR 60-1, will be listed as "MAC UNQ." Travel orders which do not contain the ACM authority must be accompanied by written authority (letter or message).

f. Personnel Eligible for ACM Status. See MACR 55-1.

3-4. Senior Personnel on 23 AF Aircraft. The following policies are established for flight when senior personnel (colonels and above) are on board as passengers or crewmembers:

a. Flights with senior personnel on board require carefully selected aircrews who are not only highly qualified in their crew duties but who can exhibit discretion and tact, and who reflect the highest standards of military bearing and courtesy.

b. On flights where advance notification permits, all predeparture requirements will be accomplished, aircraft run-up, operational checks completed, shutdown, and cocked at least 20 minutes prior to scheduled takeoff. If available, a backup aircraft will be scheduled to preclude excessive delay. If the senior officer is authorized to fly at the controls, the appropriate seat will be vacant. Personnel will be provided a helmet or headset to monitor intercom and be provided a passenger briefing. Onload/offload of senior personnel may be accomplished with rotors turning when mission requirements dictate.

3-5. Mission Essential Ground Personnel (MEGP). MEGP status is granted to individuals who perform unique support duties directly related and essential to a particular aircraft, aircrew, or mission. These duties require direct access to the aircraft and or aircrew during ground or flight operations. MEGPs travel in passenger status, but report directly to the aircraft commander for manifesting and antihijack inspection. Commanders will ensure that MEGP status is not used for travel at a higher priority than or in lieu of regular passenger travel, for avoidance of travel expenses, for travel while on leave, or to simply observe aircrew/mission operations. MEGPs will not be bumped en route without controlling MAC NAF, COMALF, or COMAFSOF approval.

a. Approval Authority. MEGP travel status will be strictly controlled and approved only for those with a bonafide mission essential purpose.

(1) MAC/AFRES, NAF, and flying unit commanders may approve MEGP status for assigned personnel on unit aircraft under their control. Eligible personnel are senior enlisted advisors, maintenance, security police, AAVS photographers, safety, and public affairs. Unit commanders may also approve MEGP status on local training missions for other assigned persons to be used as orientation flights. Passenger training restrictions apply. SMOTEC and RED FLAG MACLO approve MEGP for all test and exercise personnel.

(2) HQ MAC/DO approves MEGP status for all other personnel. DOVF is the action OPR. (For ARF UE, AFRES/DO, or NGB/XO has approval authority for ARF personnel.)

3-6. Scheduling Restrictions. Crewmembers will not be scheduled to perform crew duties:

a. When the maximum flying time limitations of AFR 60-1 will be exceeded, unless waived:

b. After consuming alcoholic beverages within 10 hours of mission reporting time, 12 hours for alert or standby or when under the influence of alcoholic beverages.

c. Within 24 hours after receiving immunizations other than smallpox and oral poliomyelitis vaccines or after being administered anesthetics for dental or surgical procedures. When mission requirements dictate, flight surgeons may authorize shorter periods of not less than 8 hours.

d. Within 72 hours after loss of 200cc or more of blood (including blood donations). This period may be lengthened at the discretion of the responsible flight surgeon. Restrictions on blood donations by flight personnel:

(1) Aircrews occupying cockpit positions in an on-call status to perform essential flight duties will not donate blood.

(2) Individuals on flying status are encouraged not to donate blood except in emergencies or unusual circumstances.

e. When taking oral or injected medication, unless individual medical waiver has been granted by the command surgeon. Mild analgesics, such as aspirin and aspirin substitutes, may be used if prescribed by a flight surgeon when the underlying disease itself is not cause for grounding. Dexedrine or similar stimulation "pep pills" will not be used unless authorized by HQ MAC/SG.

f. Within 12 hours after participating in altitude chamber flighte. Aircrew members exposed to compression chamber flights or compressed gas diving will not fly as a primary crewmember within 24 hours.

3-7. Interfly. Interfly of helicopter aircrews and aircraft between wings and squadrons normally will not be planned. Wing commanders may authorize interfly of crewmembers from different squadrons within their own wing. The 23 AF/DO, COMAFSOF, may direct an interfly in specific operations and exercises or under special circumstances (NA for ARF). In all cases, the crew will be qualified in the aircraft MDS. The 4 AF/DO or NGB/XO, as appropriate, is the approval authority for interfly on ARF helicopters.

3-8 through 3-10. Not Used.

3-11. Crew Duty Time (CDT). A flight duty period will be IAW AFR 60-1, as supplemented. Normally crewmember show times will be held to a maximum of 2 hours and 30 minutes prior to scheduled takeoff time (NA for ARF). Augmented flight duty times are applicable to all H-3/H-53 aircraft. A basic crew will not be augmented to provide additional CDT after a crew duty period has started. (CDT begins when a member performs official duties whether or not they are associated with flight duties.)

a. Unless otherwise specified in the governing OPORD/OPLAN, comply with the following crew duty

limitations for operational/contingency missions.

(1) Basic crew—H-1, 12 hours. H-53/H-3/H-60, 14 hours. Twelve hours without an operative AFCS.

(2) Augmented crew—H-53/H-3 18 hours.

b. Combination Training and Airlift Mission (including exercise participation). Crew duty day is 14 hours for the H-3/53/60 if the tactical, remote, or basic aircrew proficiency training is completed within the first 12 hours and an operative AFCS is available. The last two hours may be used to complete the nontactical delivery of cargo/personnel, aircraft, and crew to the destination base (NA for ARF).

c. Training flights and FCFs will be conducted only during the first 12 hours of the crew duty day (NA for ARF units). (EXCEPTION: Missions approved on an individual flight basis by wing/DO may be operated according to paragraph 3-11a(1).)

d. Time traveling as a passenger immediately before acting as an aircrew member counts as CDT.

e. For missions already in progress, waiver authority for maximum CDT is delegated to wing/group commander.

f. Waivers anticipated prior to mission operation require 23 AF/DO, HQ AFRES/DO, or NGB/XO approval, as appropriate.

3-12. Crew Rest. At home station, crewmembers, including those in administrative positions, will be given predeparture crew rest.

a. Crewmembers departing on missions scheduled to recover away from home station should be notified 24 hours before reporting for the mission. The first 12 hours are designed to allow crewmembers to resolve personal affairs. During these first 12 hours, a crewmember may perform limited nonflying duties. The second 12-hour period is inviolate. In the event of short-notice mission tasking or when a previously scheduled crewmember becomes unable to fly, crewmembers may be given notice of less than 24 hours. They will not be given less notice than 12 hours without 23 AF/CC approval.

b. Crewmembers on missions scheduled to recover at home station will be provided a crew rest period beginning 12 hours before reporting for a mission. If, after completing crew rest, a crewmember performs other duties, his or her crew duty time begins at the time he or she reported for these other duties. In the event of short-notice mission tasking or when a scheduled crewmember becomes unable to fly, it is permissible to contact crewmembers who have not been previously placed in crew rest and ask if they are sufficiently rested to fly. If crewmembers have had 12 hours of crew rest they may fly on the mission.

c. For routine aircrew scheduling, crewmembers will be notified of a specific time to start predeparture crew rest. Notification must be prior to actual start of crew rest.

d. Scheduling of crewmembers to respond to short-notice tasking must be done carefully, only in unusual circumstances, and only if crewmembers on alert or standby are not available or have already been committed.

e. Ground Time. The following ground times are established to enable aircrew members to accomplish their duties and receive sufficient rest:

(1) Normal ground time is 15½ houre (12 hours crew rest, one hour to show, 2½ hours for preflight and flight planning). If a crew is able to show, preflight, and flight plan in less than the planned three and one-half hours, it is acceptable to be airborne in less than 15½ hours ground time.

(2) The 23 AF unit commanders are authorized to establish ground time periods in excess of paragraph (1), above. Pilots in command of unit aircraft have the prerogative of delaying a mission, for the purpose of crew rest, whenever it is deemed advisable in the interest of flying safety. If the aircrew has completed three consecutive maximum crew duty days, the aircraft commander normally will declare additional ground time up to 36 hours. The command and control facilities will not request the AC to accept less than 36 hours.

f. Crewmembers who are delayed entering crew rest will notify the aircraft commander immediately. Ground time will start at the termination of postflight crew duties.

g. Postmission crew rest begins upon the final return of an individual to home station and runs continuously until completed. Postmission crew rest must be completed before starting predeparture crew rest for a subsequent mission. It will only be infringed upon with concurrence of the unit commander. A crewmember will not be required to get immunizations, engage in ground training, perform standby or squadron duties, or any other activity which would encroach upon crew rest. Post-TDY crew rest will be computed at the rate of one hour off for every three hours of TDY not to exceed 72 hours (not applicable to ARF).

3-13. Standby Duty. Standby duty is defined as a period of time during which a crew may be required to launch on an anticipated mission for which a firm departure time cannot be established. Aircrew members will be provided a 12-hour inviolate crew rest period preceding the start of standby duty. Unit commanders and operations officers must consider aircrew availability and mission priority when determining periods of standby duty. Periods of standby duty should not exceed 24 hours. Crews should not be placed on alert to circumvent this 24-hour period.

3-14. Alert Personnel. Alert personnel are those personnel required to be on duty and available for prompt prosecution of the 23 AF mission. The location of alert personnel will be such that desired speed-into-action standards can be met without jeopardizing the safety of personnel or equipment. Alert personnel normally will consist of the following:

a. Alert Crews. Alert crews will be readily available in an alert facility or in a location that will assure the capability to meet speed-into-action standards. When required, suitable alert facilities will include adequate sleeping accommodations for the entire crew. Flight authorizations for the alert crew will be published to cover the entire alert tour.

b. Other Alert Personnel. All personnel required to launch the alert aircraft will be placed on alert status.

c. Crewmembers will not consume alcoholic beverages during the 12-hour period prior to assuming alert duties.

3-15. Alart Duty. Alert duty is defined as any period during which an alert crew is on call to perform its mission. The alert duty period will begin at a scheduled changeover time, which will be determined by the unit commander commensurate with operational requirements and capabilities in order to ensure an orderly changeover. Aircrew members will be provided an inviolate 12 hours crew rest prior to alert duty. The length of the alert tour will be determined by the unit commander, but will not exceed 72 hours. (EXCEPTION: Det 24, 40 ARRS is authorized 125 hours alert tour.) Predeparture crew rest is waived for flight surgeons/medical technicians who are on alert duty for urgent aeromedical evacuation missions.

a. Flight duty time period starts when the crew reports for flight. The initial daily alert activities (e.g., briefing, preflight, cocking, engine run, hover check of the alert aircraft) are not to be construed as starting the flight duty time period of the alert crew.

b. The alert crew may be considered in crew rest status upon the termination of the flight, even though remaining on alert. It is recognized that numerous circumstances may arise that affect the decision to replace the alert crew, and each incident must be evaluated on an individual basis.

c. If the alert crew completes 12 consecutive hours of crew rest between flights, the previous flight duty time period no longer applies, and the cycle can be started anew provided the crew does not remain on alert for more than 72 hours from their initial assumption of alert.

d. The alert crew will not be used as a "preflight or engine run" crew for aircraft, other than the alert aircraft, nor perform other fatiguing duties.

e. Alert crews required to stand alert at locations other than their domicile during other than normal duty hours will be granted one hour of free time for every three hours of alert.

3-16. 23 AF Alert Aircraft. Rescue-equipped aircraft will be maintained on alert status IAW appropriate ARRSR 55-6.

a. Parking. The alert aircraft will be parked in a designated alert parking area to expedite taxi and takeoff.

b. Fuel Load. The fuel load of alert aircraft will be determined by 23 AF unit commanders, based on the type of operation, mission activity, and requirements within their area of operation.

c. Climatic Protective Facilities. During periods of extreme cold or severe weather, every effort should be made to shelter essential AGE and the alert aircraft in a hangar to ensure operational readiness in the event of a mission. Blade covers and engine heaters will be available for use, as required.

d. Flying Alert Aircraft. Whenever the only available aircraft is committed to a preplanned mission and is operating from home station, it will have an operationally qualified complete crew and will be considered the alert aircraft. If a mission occurs, the aircraft will respond to the emergency as expeditiously as possible. The alert aircraft may be flown for purposes other than actual missions, providing the following conditions are complied with:

(1) Speed-into-action requirements can be met with sufficient fuel to meet mission commitments.

(2) Communication contact is maintained with the RCC, local OC, CP, or other controlling agency.

(3) Notify DOC/DOO any time the alert aircraft departs the local area. Facts pertaining to the reason for flight, distance, configuration, and fuel remaining will be evaluated to determine whether the unit is considered off alert.

3-17. Alert Vehicles. Vehicles used in support of rescue activities are the responsibility of the host base. A vehicle capable of carrying the entire alert crew will be assigned to the operations section on a 24-hour dispatch. This vehicle will be used by the alert crew. Four-wheel drive vehicles capable of carrying rescue personnel and equipment in support of ground search and rescue activities will be obtained from the base. All personnel subject to alert duties should have a valid government military driver's license.

3-18. Alert Procedures. Alert crews will be given a general briefing at the beginning of each alert period. This briefing will include weather, local NOTAMs, latest FCIF information, special instructions, and any other appropriate items. Alert crews are authorized to prepare a TOLD card using the worst weather conditions expected during the alert period. This TOLD data will be used only for alert scrambles. If the alert aircraft is flown for other reasons, a TOLD card will be accomplished for that flight using existing weather conditions.

a. When an alert crew change occurs and the same aircraft remains on alert, there is no requirement to perform another complete crew preflight. However, for safety reasons and to ensure the mission ready posture of the aircraft, the oncoming crew will, as a minimum, apply power to the aircraft and check applicable items listed below:

(1) AFTO Form 781, AFORM Aircrew/Mission Flight Data Document.

(2) Interior and exterior of the aircraft for proper configuration and general condition.

(3) Fuel quantity—perform a visual check of external tanks.

(4) Hydraulic reservoirs.

(5) Accumulator air charges.

(6) Survival equipment.

(7) Weight and Balance Clearance Form F, DD Form 365-4.

NOTE: Should the aircraft remain on alert for more than 3 consecutive days, a complete aircrew preflight will be required each fourth day.

b. Once accepted for alert, the aircraft will be off limits to all personnel except alert crewmembers. No maintenance will be performed on it without prior approval of the alert crew aircraft commander and notification of the unit operations section. To ensure integrity of the crew preflight, an alert crewmember will be present whenever maintenance is performed, or at the completion of the maintenance will be required to check the area in which maintenance was performed. The check should be performed as soon as practical after the maintenance and must be performed prior to flight.

NOTE: No H-1 aircraft will be placed on alert with the hoist operator's interphons position inoperative.

3-19. Reconstitution of Alert. Whenever a unit's alert forces have been or are being utilized, that unit should make every effort to reconstitute its alert capability as soon as possible in order to react to additional missions or assist or augment present operations if the situation dictates. If this is not feasible, then efforts should be initiated with other agencies to provide assistance in covering the alert.

Chapter 4

COMMAND OPERATING RESTRICTIONS

This chapter lists operating restrictions required for safe accomplishment of the assigned mission and is directive for all helicopter operations.

4-1. Objectives. The ultimate objective of the logistics effort is to provide an aircraft with all equipment operational. With the redundant systems on our aircraft, it is recognized that for certain missions, under specific circumstances, safe operation is possible with less than all equipment operational. The complexity of today's aircraft operating on various worldwide missions has complicated the task of balancing operational reliability with safe mission completion. The final decision regarding equipment required for mission rests with the aircraft commander. When the aircraft commander considers an item essential for the accomplishment of the mission, the aircraft commander will designate the component mission-essential, and it will be repaired or replaced prior to departure. Acceptance of an aircraft by an aircraft commander to operate one mission or mission segment without an item or system does not commit that aircraft commander or a different aircraft commander to subsequent operations with the same item or system inoperative.

4-2. Policy:

a. This chapter lists the equipment or systems essential to basic air-worthiness under routine or contingency circumstances. This indicates Command restrictions only and does not include all equipment or systems essential to airworthiness. Where applicable, waiver authority for a particular restriction is indicated. Refer waiver requests through command and control channels for coordination with the aircrew standardization function at the appropriate level.

b. If beyond command and control communication capability, the aircraft commander may deviate from this directive, when necessary to protect the crew and aircraft, or return to the closest suitable repair facility.

4-3. Command Operating Restrictions:

a. Flying Aircraft Overdue Inspection. Aircraft should not be scheduled for missions which will result in a phase inspection becoming due while the aircraft is away from home station. Overflight of inspections due will be IAW 00-20 series TOs.

b. HH-53:

(1) HH-53 aircraft will not be flown with a known automatic flight control system (AFCS) malfunction except for those involving the bar alt and rad alt systems or minor amplifier adjustments. When a malfunction of the AFCS occurs in flight, the flight may be continued at the pilot's discretion IAW the H-53 flight manual.

(2) Landing gear may be left in the retracted position for HH-53 low-level navigation training missions; the EAPS should be in the closed position. On operational low-level missions, where range considerations are important, EAPS position is the decision of the aircraft commander.

(3) If a malfunctioning/broken tail skid cannot be secured in the down position, the aircraft will not be utilized for transition/emergency procedure training missions or any other training mission where approaches to touchdowns or approaches to low hovers will be practiced. On all missions flown with the tail skid in the pinned up position, landings will be accomplished from a medium to high hover.

c. Helicopter Fuel Systems:

(1) Helicopter operations will not be conducted with any malfunction in the main fuel tank quantity or warning systems, except on emergency missions. In this case, the fuel tank involved must be fully serviced and visually checked.

NOTE: UH-60A may be flown with portions of the fuel quantity segment or digit lights inoperative as long as total fuel quantity can be accurately determined.

(2) Inoperative Fuel Boost Pumps. With one boost pump inoperative, H-1F aircraft will not be dispatched on missions requiring flight above 5,000 feet MSL. With one boost pump inoperative, H-1H/N aircraft will not be dispatched on missions requiring flight above 4,600 feet MSL and must plan to arrive at destination with 500 pounds of fuel reserve.

(3) Lightlift Helicopter Cabin Mounted Auxiliary Fuel Tanks. Cabin-mounted noncrashworthy auxiliary fuel tanks will not be installed/used on lightlift helicopters that have crashworthy main fuel systems, unless specifically authorized by 23 AF/DO (ARF/DO for ARF units). EXCEPTION: SOF UH-1N and 37 ARRS H-1H units in support of the SAC EWO plans and convoys when planned convoy time exceeds one hour and 45 minutes.

d. The following restrictions apply concerning use of checklists, flight publications and other materials:

(1) Checklists, flight publications and other materials will not be placed on the center console while the rotors are turning.

(2) H-1H, H-60 and H-1F. Checklists may be stowed on the aft portion of the center console (H-1Hand H-60) and anywhere on the center console (H-1F) providing the following conditions are met: aircraft is not missing any switch guards, local pedestal configuration provides sufficient blank space to allow items to lie flat without covering any switches, dials, etc., and all crewmembers are briefed to take appropriate care when handling the checklists.

(3) Stow all flight publications and materials when not in use.

(4) No metal objects, flashlights or battery operated devices will be placed near the standby compass while in flight.

e. Air Refueling. Normal refueling altitude will be IAW TO 1-1C-1-20 unless specific mission circumstances warrant other altitudes.

Chapter 5

HELICOPTER OPERATING POLICIES

SECTION A—GENERAL OPERATING POLICIES

5-1. Adherence To Rules. Comply with AFR 60-16, USAF Foreign Clearance Guide, FLIP, and this regulation.

5-2. Checklists. Accomplish all checklists with strict discipline. A checklist is not complete until all items have been done in sequence. Momentary hesitations for coordination items, ARTC interruptions, and deviations specified in the flight manual, etc., are authorized. Use of a checklist during actual landings, takeoffs, taxiing near aircraft, buildings, or other hazards, or in certain emergency situations is considered impractical and unsafe. At the discretion of the aircraft commander, the flight engineer may read all checklists.

a. H-1 Checklist Procedures. When two pilots occupy cockpit positions, the pilot not flying the aircraft or a flight engineer will read the checklist item(s) and the pilot flying the aircraft will respond when the item is completed.

b. Insert current, approved flight manual/MAJCOM checklists in the USAF flight crew checklist binder. Additional notes, etc. will be inserted IAW AFR 60-9.

c. Notes amplifying checklist procedures and limitations may be added. Currency of notes is the crewmember's responsibility.

5-3. Control. A designated aircraft commander or copilot will be in control of the aircraft at all times during flight. The aircraft commander and copilot will be in their crew position seats.

5-4. Passengers Occupying Crew Positions:

a. Aircraft commanders of H-3/53 helicopters may authorize passengers to sit in the flight engineer's seat during cruise flight. Wing CC and Group CC/mission commander may approve authorized passengers to sit in the flight engineers seat during other phases of flight on specific missions.

h. Any passenger occupying a crew position will be on interphone.

5-5. Takeoff and Landing Policy. A qualified flight examiner, instructor, or aircraft commander (aircraft commander upgrade) will make all takeoffs and landings during aircraft emergencies, when operating in areas of hostile activity, or when marginal conditions exist. It is recognized that some emergency and tactical situations do not permit compliance. In these cases, the pilot in command will make the final decision.

5-6. Copilot Maneuvering Policy. Copilot qualified crewmembers are authorized to fly the aircraft under the supervision of an aircraft commander during noncritical phases of operational and special mission maneuvers. The decision as to what constitutes the criticallty of a maneuver must rest with the aircraft commander and depends upon the evaluation of the conditions present at the time; i.e., power reserve, terrain, weather, copilot ability. The following maneuvers will only be performed by copilots under the supervision of an instructor pilot:

a. Night water hoist (EXCEPTION: PAVE LOW, when using unique systems)

h. Air refueling (except PAVE LOW).

On missions in support of formal USAF survival schools, copilots may be at the controls during hoist and deployment missions only after receiving instructions in the maneuver.

5-7. Deployment of Non-MAC Parachutists. Wing CC/mission commanders may authorize non-MAC parachutists to deploy from 23 AF aircraft. Personnel authorized must have a valid operational currency, administrative or training requirement. In addition, the personnel must be graduates of an accredited armed forces parachutist course and possess aeronautical parachutist orders. The aircraft commander or a designated representative will inform the jumpmaster of required qualifications. It is the jumpmaster's responsibility to ensure all participants are in compliance with these requirements. For water jumps utilizing SCUBA equipment, personnel must be certified military SCUBA divers.

NOTE: Parachutists that meet the requirements of this paragraph and allied forces pararescumen are authorized to deploy from 23 AF aircraft provided that a qualified jumpmaster is on board. The 1550 CTTW is authorized to jumpmaster qualify their assigned P921XO survival technicians using appropriate pararescue regulation.

5-8. Helicopter Escort Requirements. Extended overwater flight is defined as flight beyond the navigation (operable TACAN, VOR, Doppler, Omega, or INS) or communication reception capabilities of the helicopter/formation. All helicopters will be accompanied by an overwater natigation/communication capable aircraft on extended overwater flight.

EXCEPTION: This restriction is not applicable to Detachment 15, 39 ARRW, support of Grand Bahama Island Cay sites. When engaged in air refueling operations beyond the helicopter's navigation or communications systems capabilities, the tanker will provide necessary navigation or communication assistance and necessary weather reconnaissance. Tankers with only one refueling system operative will not be scheduled as the primary or sole tanker where receivers operate at or near their fuel range limits.

5-9. Scanners. Crewmembers not performing basic crew dutiss will be used as scanners to avoid obstacles during confined area operations and to reduce midair collision potential during arrivals, departures, and simulated instrument flight.

a. Scanners chairs are authorized for use on the H-53. Chairs are not a substitute for crew or troop seats but will only be used to relieve fatigue when scanners are required to be posted for long flight durations.

b. When in use, the chairs will be secured by a cargo tiedown strap in a place affording scanners the greatest area of visibility. The chairs will be removed and properly stowed (secured) during hoist, gun, remote or cargo sling operations.

5-10. Seat Belts. At least one pilot will have seat belt and shoulder harness fastened when rotors are engaged. A seat belt, authorized restraint harness, or parachute will be worn by all occupants in the cabin compartment when doors are open during flight (see chapter 24 for alternate loading procedures). Crewmembers may perform duties that require them to be unrestrained for short periods of time provided they are not in close proximity to an open door. All occupants will be seated with seat belts fastened during taxi, takeoff, initial climb, and approach and landing in H-3/53, and at all times in H-1/60A.

EXCEPTIONS: The aircraft commander may direct crewmembers:

a. To perform duties that require the use of an approved restraint harness in lieu of a seat and seat belt when mission requirements dictate. In this case seats and seat belts must be readily available and immediately accessible to all crewmembers in case of an emergency.

b. To perform duties in the cabin of H-1/60A helicopters unrestrained for brief periods when required to don harnesses, attend passengers or change seats, provided doors are closed. Parachutists may change positions with doors open if parachutes are worn.

c. To perform duties in H-3/53 helicopters during hover and taxi, unrestrained for brief periods when necessary for topping adjustments or cabin checks.

d. CH/HH-3/53 flight engineers are exempt from wearing the shoulder restraint harness when it prevents movement required with associated duties, except for initial takeoff and final landing. The seat back will be up and the lap belt used at all times.

5-11. Aircraft Lighting. Operate aircraft lighting IAW AFR 60-16 and the following, except where mission requirements dictate otherwise:

a. Do not operate strobe lights during extended ground operations because of undue distraction to pilots and ground personnel. Strobe lights may be off when using NVGs at night below 300' AGL. (Authority: HQ USAF/XOOTF letter, 24 March 1981). A fully operative anticollision strobe light is required day and night. Except for life and death rescue missions, or priority one missile security missions, aircraft without an operative anticollision light will be flown only to a point where repairs can be made. Aircraft configured with multiple strobe lights may be flown with one light inoperative.

b. When operating below 10,000 feet MSL, day or night, either the search or landing light will be illuminated unless reflections cause pilot distractions or mission requirements preclude their use. This requirement is not applicable to aircraft equipped with operative strobe lights.

c. Night water hoist and night aerial refusling missions require one fully operative search/refusling white light. H-53 PAVE LOW must have operable landing lights as a minimum.

d. Landing/searchlights will be on for all night takeoffs and after turning final for night approaches unless safety, weather, excessive glare or aircraft operational procedures dictate otherwise.

5-12. Electronic Devices. Hand-held electronic calculators may be used inflight provided they do not print and are battery operated. Aircraft commanders may authorize crewmembers and passengers to use electric razors during cruise. Crewmembers and passengers will not use portable radios, recorders, television sets, or other portable electrical and electronic devices aboard the aircraft. Signals from such devices can affect navigational and flight instrument equipment.

EXCEPTIONS: 37 ARRS units Airborne Fire Team members may use authorized hand-held communications radios while engaged in convoy support missions. Hand-held or portable communication/navigation radios may be used on SOF helicopters.

5-13. Smoking Restrictions. Smoking is prohibited IAW AFR 60-16:

a. When directed by the aircraft commander.
b. During any ground/hover operation.
c. Immediately after takeoff and before landing.
d. In cargo compartment when fuel, flammable materials, or items containing explosives are in that compartment.

NOTE: Smoking with ammunition or Class C pyrotechnics in closed containers on board is authorized.

e. During fuel dumping.
f. During fuel transfer from external tanks.
g. When fuel fumes are detected.
h. When moving about within the aircraft.
i. During flight through turbulent air.
j. During aerial refusling.
k. Within 6 feet of any patient or passenger using oxygen.
l. During approaches when practicing emergency procedures.

5-14. Advisory Calls:

a. Mandatory altitude calls for the pilot not flying the aircraft:

(1) Nonprecision Approaches:

(a) One hundred feet above minimum descent altitude (MDA).

(b) "Minimums" at MDA.

(c) "Runway in sight." Call when the runway environment is in sight. Do not call too soon when obstructions to vision (such as fog, haze, low stratus clouds, etc.) are present.

(d) "Go-around." Call at missed approach point if the runway environment is not in sight.

(2) Precision Approaches:

(a) One hundred feet above decision height (DH).

(b) "Land." Call at decision height if the runway environment is in sight and the aircraft is in a position for a normal landing.

(c) "Go-around." Call at decision height if the runway environment is not in sight or if the aircraft is not in a position for a normal landing.

(3) Climb Out:

(a) Transition altitude

(b) One thousand feet below assigned altitude

(4) Descent:

(a) Transition level

(b) One thousand feet above assigned altitude

(c) One thousand feet above initial approach fix altitude or holding altitude

b. The pilot not flying the aircraft will tell the other pilot when heading or airspeed deviations are observed or when indicated altitude is more than 100 feet from desired. Any crewmember seeing a variation of 200 feet altitude or potential terrain or obstruction problem will immediately tell the pilot. Deviations from prescribed procedures for the approach being flown also will be announced.

c. Mandatory altitude calls for the pilot not flying the aircraft during initial night VFR descents will be:

(1) One thousand feet above intended altitude.

(2) One hundred feet above intended altitude.

(3) Intended altitude.

5-15. Communications Policy:

a. Interphone Communications:

(1) During ground operations, takeoff, climb, descent, approach and landing, or during any critical phase of flight, limit intraplane transmissions and radios monitored to those essential for crew coordination.

(2) Avoid discussing classified information on interphone.

(3) All crewmembers will listen to interphone and hot microphone. Clearance is required from the aircraft commander prior to going off interphone.

(4) Pilots should periodically announce their intentions when flying departures, arrivals, and approaches.

b. Command Radios:

(1) Normally, only one command radio plus guard will be used and monitored. Monitoring two ATC controlling agencies' transmissions simultaneously is not recommended. This does not preclude establishing contact or radio check on another frequency.

(2) All crewmembers will monitor the primary command radio unless specifically directed to do otherwise by the aircraft commander.

(3) The pilot operating command radios will tell the crew which radio is primary.

(4) Regardless of the primary command radio, UHF GUARD (243.0) will be monitored (if operative).

(5) When the aircraft is both UHF and VHF equipped and operating in other than normal configuration (e.g., one engine inoperative, a hydraulic or electrical malfunction, communications difficulty, etc.), the pilot will request simultaneous transmission of instructions on a back-up frequency when operating under radar control.

(6) One of the pilots will record and read back all ATC clearances except when ATC instructions require immediate execution and read back would interfere with the timely performance of aircrew duties.

5-16. Illumination Requirements for Helicopter Landing Areas. Helicopters on essential operational or support missions may be authorized by the unit commander to operate into and from unlighted areas provided all available illumination is used including parachute flares, when feasible. Running takeoffs and landings will be made only to a runway or taxiway that is clearly discernible by lights (NA for NVG operations). On all other missions except night water hoist (training, routine operational or support, etc.) operations into remote restricted areas between official sunset and official sunrise will be made only if one of the following conditions can be met:

a. The area is outlined by discernible lights or parachute flares.

b. The pilot can see clearly the approach path and landing surface (as would be possible immediately after official sunset before sunrise, or with NVGs or PAVE LOW system).

5-17. Altitude Restriction. Conduct all operations at or above 500 feet AGL IAW AFR 60-16 except when lower altitudes are required for takeoff, landing, operational missions, training flights in approved areas or routes, approved exercise missions.

a. Hellcopters are limited to a base altitude of 50 feet above obstacles during day low-level and night tactical NVG operations.

b. Minimum en route altitude during night navigation, both operationally and for training, is 500 feet above the highest obstacle within five NM. This limitation does not apply to NVG operations or flights on an approved low-level route.

c. Non-NVG night navigation flights on approved low-level surveyed routes may be conducted down to:

(1) Three hundred feet above the highest obstacle within one NM of the flight path, in nonmountainous terrain.

(2) Five hundred feet above the highest obstacle within two NM of the flight path, in mountainous terrain.

d. NVG operations may be conducted down to 50 feet obstacle clearance when sufficient illumination is available (see paragraph 30-2). When available illumination will not permit safe NVG operations at minimum altitudes, the following restrictions apply:

(1) Minimum altitude is 300 feet above the highest obstacle within 1/2 NM of the flight path, in nonmountainous terrain.

(2) Minimum altitude is 500 feet above the highest obstacle within two NM of the flight path.

e. Pilots must compute a safe escape altitude for each leg of the low-level route. For flights conducted in a designated low-level area, a safe escape altitude will be computed for the planned area of operation. Use the following criteria for escape altitudes:

(1) VMC. (NVG and non-NVG night low-level flights.) The heading and altitude must provide a minimum of 500 feet above obstacles within two NM of the course centerline when maintaining VMC.

(2) IMC. (Day and night.) The heading and altitude must provide a minimum of 1,000 feet above the highest obstacle within 10 NM of the course centerline (2,000 feet clearance in mountainous areas) when IMC is encountered. Within the United States (50 states), this distance may be reduced to five NM.

f. When unable to determine the aircraft position during low-level operations training, climb to the minimum safe VMC escape altitude (day or night, as appropriate) and reorient yourself before resuming low-level navigation.

NOTE: Mountainous areas are defined as areas where a 500-foot gradient occurs within½ NM of the flight path.

SECTION B—NORMAL HELICOPTER OPERATIONS

5-18. High Rise Evacuation. Twenty-Third AF helicopters will not participate in high rise building evacuation training. Units may participate in local community disaster planning; however, 23 AF resources will not be formally tasked in that plan. In the event of an actual SAR, the following guidance applies:

a. Aircrews must use extreme caution when operating near high rise buildings. Pinnacle operating procedures

apply to this type of operation. Particular attention should be focused on manmade hazards, winds, visual cues, and power requirements.

b. A building on fire presents additional hazards not normally encountered: severe temperature changes, convective and orographic turbulence, and the urgency of the situation. Safety of the crew and aircraft will not be jeopardized.

5-19. Wind Restrictions. Helicopter flights, as indicated, will be discontinued when the winds exceed:

a. Training Missions:

(1) Thirty knots steady state or 20 knots gust spread.

(2) Forty knots steady state or 20 knots gust spread when an instructor pilot is in command.

b. Operational and Support Missions:

(1) IAW applicable flight manual.

(2) Forty knots steady state or 20 knots gust spread for 37 ARRS Priority 2-6 support mission.

5-20. Aircraft Refueling. When not directly involved in the refueling operation, personnel will remain at least 50 feet from the aircraft. (EXCEPTION: Approved hot refueling/FARP operations.) Do not taxi another aircraft within 50 feet of a refueling operation.

5-21. Aircraft Taxi Obstruction Clearance Criteria.

a. Without wing walkers, avoid taxi obstructions by at least 25 feet; with wing walkers, by at least 10 feet.

b. When taxi clearance is doubtful, use a wing walker(s). If wing walkers are unavailable, or if provided and doubt still exists as to proper clearance, deplane a crewmember(s) to maintain obstruction clearance.

5-22 through 5-23. Not Used.

5-24. Increased Risk Missions. An increased risk mission is defined as any mission which (in the flying unit commander or designated representative's judgment) places 23 AF resources in an increased accident potential position. This authority/responsibility does not prohibit seeking upchannel assistance/guidance in making an increased risk determination. Once determined, increased risk missions will be reviewed and approved by the wing CC/DO (ANG Group CC/DO) prior to entering the increased risk phase of the mission. This will not degrade the operational control commander's authority to direct the mission. Rather, it will assure maximum expertise is brought to bear on those missions that may increase the hazard to aircraft and crew. This policy will not be supplemented or altered by intermediate command level.

a. As the commander's representative and normally the first on scene, the aircraft commander must thoroughly evaluate all factors prior to committing resources during an operational mission. If it will involve increased mishap potential, he/she will make every effort to communicate this to his/her unit/controlling agency.

b. Upon the unit commander or designated representative's decision that a mission will involve increased risk, a conference call will be initiated through 23 AF/ARF command and control channels to all interested agencies. Participating agencies should review the following mission conditions as appropriate:

(1) Agency requesting 23 AF assistance and to what level of operational control has it coordinated on the use of 23 AF resources.

(2) Precedence of mission and name of competent authority which established the requirement for it.

(3) Mission, design, and series of 23 AF aircraft involved.

(4) Qualification of crew.

(5) Anticipated type of recovery (i.e., land/water hoist, water dsployment, etc.).

(6) Topography or sea conditions of objective area.

(7) Weather for departure, en route, objective, and recovery areas. Include present and forecast ceiling, visibility, wind, etc.

(8) Time en route and fuel avallable.

(9) Required support (i.e., escort, inflight refueling, flare drops, etc.).

(10 Method of recovery of deployed pararescue personnel.

(11) Alternate SAR forces capable of performing the mission and/or provide assistance (if applicable).

5-25 through 5-28. Not Used.

5-29. Rotor Turning Off and Onload Procedures. The following procedures will be employed when helicopter rotors are turning:

a. Passengers will be briefed by the aircraft commander or designated representative on procedures to be followed.

b. The right cabin door will be the primary entrance and exit door on the H-3/53/60A. The aft ramp in the H-53 and H-3 may be used after the aircraft commander has ensured adequate tail rotor clearance and passengers have been briefed to avoid the tail rotor area. Operational off/onload of combat troops is normally via the aft ramp on the H-3/H-53. The gunner/scanner on the ramp will ensure troops do not go in the immediate vicinity of the tail rotor. The gunner should not leave his weapon position to escort teams in a threat environment.

c. One crewmember will escort passengers through the safe approach zone when on or offloading the aircraft, except when off/onloading in a threat environment or during combat training. (Not applicable to H-1 aircraft commanders on single pilot missions.)

d. Rotors turning off and onload for crew changes during local training missions are authorized provided the enplaning crew does not approach the helicopter until the deplaning flight engineer or other crewmember is in position to clear their approach. The crewmember clearing in personnel must be on intercom.

Chapter 6

AIRCREW PROCEDURES

SECTION A—PREMISSION

6-1. Aircrew Uniforms and Protective Devices:

a. The MAC aircrew uniform, outlined in AFR 35-10/MACSUP 1, will be worn by all crewmembers. EXCEPTION: 23 AF pararescuemen are not required to wear fire retardant clothing when special purpose clothing is considered more appropriate for mission completion (AUTHORITY: HQ USAF/XOO letter, 17 July 1978, Waivers to AFR 60-16).

b. Flying Clothing. When reporting for flights or alert duties, aircrew personnel will wear designated flying clothing appropriate for the climatic conditions and terrain over which the flight will be made, as determined by the unit commander, and configured IAW AFR 35-10, as supplemented.

c. Eye Protection. Protective goggles or the helmet visor will be used for eye protection by personnel whose duties require them to be in close proximity to the operating helicopter. Wear goggles whenever dust, sand, dirt, etc., constitute a hazard. During all live firing of weapons from an aircraft, ensure that all personnel involved in the firing of weapons wear eye protection to include one of the following: helmet visors, safety goggles, aircrew gas mask or night vision goggles. Eyeglasses or sunglasses alone do not satisfy the requirement.

d. Ear Protection. The interior of helicopters inflight contains hazardous noise levels. Aircrews will ensure that hearing protection devices are available on each aircraft prior to flight. A crewmember will be responsible for distributing these devices to all passengers.

6-2. Personal Requirements. Crewmembers will carry or wear personal and professional equipment as follows:

a. Helmet
b. Gloves
c. Flashlight
d. Identification Tags
e. Prescribed corrective glasses
f. Rings. Do not wear rings or other jewelry with personal injury potential while in or on aircraft.

6-3. Tool Kits. The flight engineer or helicopter mechanic will have a tool kit on board for all flights (LLH need only carry tool kits outside the local flying area). Individual units will establish requirements for tools to be included in these kits. As a minimum the kit will include enough tools to remove and install chip detector plugs. Tool kits will have an inventory list for accountability and will be sealed. If the seal is broken the aircraft commander will inventory the kit and sign the accountability list prior to the next flight.

6-4. Aircrew Publications Requirements. All crewmembers will maintain and carry on all flights their applicable abbreviated checklist and MACR 55-54, Annex A.

6-5. Not Used

SECTION B—PREDEPARTURE

6-6. Crew Reporting. Normally, aircrews will not be required to show for flight in excess of 2½ hours prior to scheduled takeoff time. Units may establish show times to meet specific mission requirements.

6-7. Flight Crew Information File (FCIF). Review volume I, part A, before departure on all missions.

a. Update MAC Form 396, FCIF CCurrency Record, if new material has been added to the FCIF since the last review. Enter the last FCIF item number, date, and initial the MAC Form 396. Initialing the MAC Form 396 certifies review of all items .

b. Crewmembers delinquent in FCIF review or joining a mission en route will receive an FCIF update from their primary aircrew member counterpart on that mission. Instructor pilots who fly with general officers are responsible for briefing appropriate FCIF items.

c. Crewmembers not assigned or attached to that unit will certify FCIF review by entering the last FCIF number and their initials behind their name on the file copy of the flight authorization or their ACM orders.

6-8. Airfield Security Program. When departing on missions outside the CONUS, aircraft commanders will review the unit classified airfield security file. Document review of the file by initialling and dating the MAC Form 396, leaving the "LAST DOC NO" column blank.

6-9. Mission Kits. Units will maintain one mission kit per aircraft. Prior to departure, the aircraft commander, or designated representative, will ensure that a current mission kit is aboard the aircraft. The kit will contain, but is not limited to, the items listed below.

EXCEPTION: The 1550 CCTW will establish the contents of the mission kit for their assigned aircraft. The 37 ARRS will establish kit contents IAW chapter 23. Items required by a unit or wing directive to be maintained on the aircraft or carried by a specific crewmember need not be duplicated in the mission kit. Sufficient quantities of directives and planning documents will be maintained to allow implementation of evacuation contingency plans.

NOTE: Mission kits are not required on helicopter FCFs as long as a flight manual is carried.

CONTENTS OF MISSION KITS

SECTION I

1. Aircraft Flight Manual (-1)
2. Air Refueling Manual (-20) (If applicable)
3. AFR 67-24, Emergency Procurement of Ground Fuels, Oil, and other Supplies and Services at non-DOD Locations
4. AFR 60-16, General Flight Rules
5. AFR 144-15, Refueling at other than US Air Force Bases
6. MACR 55-54, MAC Helicopter Operations

7. AF Form 664, Aircraft Fuels Documentation Log
8. AF Form 651, Hazardous Air Traffic Report (HATR)
9. AF Form 15, USAir Force Invoice and AF Form 15A, Invoice Envelope
10. AF Form 457, USAF Hazard Report
11. AF Form 315, United Statss Air Force AVFUELS Invoice
12. MAC Form 97, USAF Aircraft Mishap Report Worksheet
13. MAC Form 325, The MAC Accident Waiting to Happen Program (AWTH) (NA for AFRES)
14. Current Flight Crew Bulletin
15. MAC Form 423, MLJI Incident Report Worksheet (for combat units)

SECTION II

1. FLIP IFR Supplement (one each)
2. FLIP VFR Supplement (one each)
3. FLIP Flight Information Handbook (one each)
4. FLIP En Route Low Altitude Charts (one set for area of operation)
5. FLIP Low Altitude Instrument Approach Procedures (two sets for area of operation)
6. Maps and Charts (as required) (sectional aeronautical charts)
7. Flight Planning Forms (as required)
8. Operational Site Diagrams or Photo
9. MAC Forms 504, 505, and 506 (as applicable) Emergency Briefing Card (10 each)

6-10. Not Used

SECTION C—BRIEFINGS

6-11. Briefing Requirements. Use briefing guides in Annex A for aircrew briefings. Aircraft commanders will ensure their crews have received briefings prior to each mission. More than one briefing may be required for specific missions. However, redundant items may be omitted.

a. Crew Briefings:

(1) Cover all specific areas to be accomplished during the mission. These briefings should be conducted in a formal briefing atmosphere. Those crewmembers excused from attending the formal aircrew hriefing will be briefed on all areas pertinent to their duties by the aircraft commander prior to flight.

(2) Pilot Not Flying. The crew briefing must include a discussion of the responsibilities of the pilot not flying the aircraft during the mission. Outline the responsibilities of the pilot not flying during emergencies and critical phases of flight (i.e., radio calls, monitor instruments, airspeed, altitude, rotor rpm, etc.). The pilot not flying is responsible for alerting the pilot flying to potential hazards and critical flight information as necessary during the flight.

b. Passenger Briefings. Prior to each flight, the aircraft commander will ensure that all passengers are briefed. (The MAC Form 504; H-3 Emergency Information, MAC Form 505, H-1 Passenger Emergency Information, and the MAC Form 506, H-53 Super Jolly Green Giant Emergency Information, are the emergency briefing cards and will satisfy this requirement.) Briefing will include demonstration of seat belt and restraint harness. When more than one flight is accomplished by the same crew and passengers during the day, subsequent briefings will not be required, except that route information, mission changes, etc., will be briefed. When additional passengers are added on subsequent flights during the same day, they will be completely briefed. All over water flights will include a briefing on personal and aircraft life support equipment, i.e., life preserver use and life rafts.

c. Flight Briefings and Procedures. The following briefings and procedures will be the responsibility of the pilot in command, and will be completed in addition to other briefing requirements.

(1) Departure. Before initial takeoff, brief the crew on the procedures to be followed during takeoff and climb to cruising altitude, and instructions for returning to the airport/landing area in case of an emergency. Include headings, altitudes, hazardous terrain and emergency intentions. The copilot (if applicable) assists in accomplishing the planned procedures and reports any deviation from the plan to the pilot. The pilot will announce intentions periodically throughout the departure. For subsequent takeoffs during the mission, brief those items that have changed.

(2) Inflight. Inflight briefings will be conducted, as necessary, to cover any unusual circumstances and when flight safety or other conditions require the nonstandard accomplishment of any maneuver. Operational maneuvers will be briefed IAW this publication.

(3) Descent for Landing. Prior to descent, review the appropriate local area chart(s), approach charts, FLIP and other pertinent information, as required. The pilot not flying the aircraft will provide a continual cross-check of aircraft position/terrain clearance during the descent.

(4) Approach and Landing. Before starting each approach, the pilot flying the aircraft will hrief the procedures to be followed during approach, landing, and missed approach, if necessary. This hriefing may be accomplished in conjunction with the Before Landing Checklist in the flight manual.

d. Weather Briefing. Crews on immediate alert will obtain a weather briefing for their area of responsibility at the beginning of the alert tour and each 24 hours thereafter (if applicable). Aircraft commanders will check the weather periodically for significant changes during alert tour. If an IFR scramble occurs, the weather briefing will be updated in person, by telephone or by radio.

6-12, 6-13. Not Used

SECTION D—FLIGHT PLANNING

6-14. Flight Plans:

a. Twenty-Third AF/ARF approved forms are authorized for use in lieu of DD Form 175, Military Flight Plan, or DOD International Flight Plan, for VFR flights terminating at the base of departure.

b. Formation Flights. Flight plans for IFR formation operations will be completed and filed IAW FLIP planning and AFR 60-16. In addition, the remarks section will include the number of aircraft in the flight and type of formation.

c. Verify all proposed routes and altitudes to ensure adequate obstacle and terrain clearance. For proposed routes/segments that are off airways, use maps for assuring obstacle clearance, with use of spot elevations and contour lines for determining minimum altitudes.

d. Use an AF Form 70 (or other 23 AF/ARF approved forms), Pilots' Flight Plan and Flight Log, for all cross-country flights outside the designated local flying area. On urgent rescue missions when completion of the form would unacceptably delay response, it is not necessary to AF

Form 70 provided adequate route and fuel management planning is accomplished.

6-15. International Procedures. Aircraft commanders will review the USAF Foreign Clearance Guide and brief crewmembers on applicable items before flights outside the CONUS. Comply with customs, immigration, agriculture, immunization, and quarantine requirements. The unit dispatching the mission is responsible for border clearance and other special clearances when required. Entry into foreign countries by personnel and equipment to conduct SAR missions will be as directed by military agreements, diplomatic agreements, directives of the operational control commander, ICAO standards, and the Foreign Clearance Guide.

6-16. Maps. The following maps will be maintained in each unit:

a. Low-level hazards map. Hazards to low-flying aircraft will be depicted for the local areas and areas of frequent operation. They will be plotted on a suitable chart and be displayed in the crew briefing area. Changes will be made as received and be brought to the attention of all crewmembers. The chart will be reviewed monthly. The person making the review will annotate the chart with his/her name, and the date of review. An appropriate legend for the hazards will be included.

b. A map will be available for all low-leval routes or areas. These maps will comply with the provisions of MACR 55-54, EXERCISE/LATN PROCEDURES, paragraph 4.

6-17 through 6-21. Not Used

6-22. Weather Minimums:

NOTE: Aircraft operating at tbe base altitude of a transition area or control area are considered to be within the airspace directly below that area.

a. VFR Minimums:

(1) The following minimum weather criteria/ceiling/visibility apply during all VFR training operations (unless higher is specified elsewhere):

(a) Day Training - 700 ft/one mile.

(b) Nigbt Training - 1,000 ft/two miles.

(2) Wings may establish individual unit minimum weather criteria (ceiling/visibility) for operational/support missions, if necessary. Minimums will not be less tban AFR 60-16 minimums:

b. IFR Takeoff Minimums:

(1) Training flights. Weather equal to, or higher than, published approach minimums (ceiling and visibility), but no less than 1/2 mile (RVR 24) at the departure airfield.

(2) Operational Misalon:

(a) Weather at the departure airfield must be equal to, or higher than, the published visibility minimums required for the appropriate aircraft category for an available approach if takeoff is made without a departure alternate.

(b) Takeoff with a departure alternate requires weather conditions equal to or above one-half the published visibility minimums required for the appropriate aircraft category, but no less than one-quarter mile (1,200 RVR) for an available approach at the departure airfield. Published visibility is required if a copter-only approach is used at the departure airfield. Select the departure alternate using the following criteria:

1. Departure alternate should be within 30 minutes' flying time.

2. Weather en route to the alternate must permit flight within aircraft limitations. For twin-engine helicopters, the aircraft must be capable of maintaining minimum en route altitudes (MEA or MOCA, whichever is higher) to the alternate if an engine fails.

3. The departure alternate prevailing weather must be equal to or better than the lowest published approach ceiling and visibility minimum (no lower than 1200 RVR) and forecast to remain so for one hour after takeoff.

(c) During life and death SAR missions, helicopters may take off if the visibility is sufficient to taxi to the takeoff area. Ensure an appropriate course of action is available (and briefed) in the event of an emergency after takeoff.

6-23. Destination Alternate(s). Destination alternate requirements will be IAW AFR 60-16.

6-24. Adverse Weather Planning. Do not operate aircraft into known or forecast weather conditions (icing included) which exceed the limitations specified in the flight manual. Flight may be made into areas of known or forecast thunderstorms if VMC is maintained and thunderstorm activity is avoided by a minimum of five NM. Flight will not be made into rain shafts beneath cumulonimbus clouds. Takeoffs/landings will not be made when severe turbulence has been reported in the airport traffic area, or thunderstorms are in the immediate vicinity of the airfield/landing area.

6-25. Fuel Planning:

a. For flight planning purposes, when visibility-only criterion is used, fuel requirements for descent, approacb and missed-approach will be: 250 pounds H-1; 400 pounds H-60A; 500 pounds H-3; 1,000 pounds H-53. This is also required if DD Form 175-1, Flight Weather Briefing, or similar document indicates destination weather information may be unreliable. Additionally, for all flights VFR or IFR, plan to arrive at destination with the following fuel reserves: 200 pounds H-1; 400 pounds H-60A; 500 pounds H-3; 900 pounds H-53.

b. Under all circumstances, pilots will initiate action to assure a safe landing when the fuel low-level caution light illuminates.

c. With prior approval of 23 AF/CC (ARF/DO for ARF missions), aircraft may be cleared to fly to or between ARCPs with insufficient fuel to fly to a destination or recovery base in the event of an unsuccessful refueling. Approval may be granted only when engaged in actual rescue/contingency mission. (Authority: HQ USAF/XOO letter, 27 December 1978, HQ MAC Waivers to AFR 60-16.)

6-26 through 6-30. Not Used

SECTION E—PREFLIGHT

6-31. AFTO Form 781, Aerospace Vehicle Flight Data Document. Review the AFTO Form 781 before applying power to the aircraft or operating aircraft systems. The exceptional release must be signed before flight. A maintenance officer, maintenance superintendent, or authorized civilian will sign the exceptional release. If one of these individuals is not available, the aircraft commander may sign the exceptional release. Ensure that the USAF fuel identaplate is aboard the aircraft.

6-32. Aircraft Servicing and Ground Operations:

a. Aircraft Refueling. Aircrew members qualified in refueling may perform refueling duties. Flight engineers used as refueling supervisors/ panel operators will comply with TO 00-25-172. At bases with MAC support, aircrews will not refuel except in isolated cases when maintenance support is not readily available and the mission would be delayed. Due to crew duty limitations, this policy must be rigidly controlled. Submit MAC Form 54, Aircraft Commander's Report on Services/Facilities, when aircrews are required to service aircraft at locations with MAC maintenance support capability.

b. Hot refueling will be conducted IAW MACR 55-5 and appropriate flight manuals.

6-33. Dropped Object Prevention. During aircraft exterior visual inspections, pay particular attention to surfaces, panels, components which are potential dropped objects.

6-34. Life Support Requirements:

a. Upon reporting to the aircraft (the aircraft commander or designated representative), ensure that sufficient quantities of appropriate serviceable life support/survival equipment and protective clothing for the entire mission are aboard the aircraft. Certify AFTO Form 46, Prepositioned Life Support Equipment, prior to flight.

b. Life rafts and life preservers are not required when overwater flight occurs only for short distances immediately after takeoff and before landing. Life preservers will be worn by helicopter aircrews and passengers on overwater flights when route of flight is beyond autorotation gliding distance of the shore.

c. Parachutes. Wear backpack parachutes or chestpack harnesses with the pack readily available:

(1) During midair retrieval missions when making approaches to the parachute system, and until the retrieval system is stowed.

(2) On all other missions, wear of parachutes is optional. Aircraft commanders will ensure that parachutes are available to those crews and passengers desiring them.

d. Survival Vest Requirements. Helicopter crewmembers will wear survival vests when flying outside the local airport traffic area.

EXCEPTION:Wear of the survival vest is optional with winter weight flight clothing, if the combination of vest with winter clothing interferes with movement of the flight controls. If the vest is not worn under these conditions, it will be immediately available. Survival vests will be readily available when not worn or when flights will remain within the local traffic pattern area. Wearing of the survival vest is not required for Det 2, 67 ARRS crewmembers on DV support missions.

e. All crewmembers will be advised by the aircraft commander and a discrepancy will be entered in the AFTO 781A whenever aircraft emergency equipment is not located IAW the appropriate aircraft technical order.

6-35. IFF/SIF. If possible, ground check IFF/SIF prior to takeoff. IFF self-test or radar interrogation will satisfy this. This is not required on stopover flights if the IFF was operational upon landing. Use IFF/SIF IAW chart below.

WORLDWIDE IFF CHART

IFF MODE	NATO	LANTCOM & NOPAC BETWEEN 170E & 1503	ALL OTHER AREAS
1	IAW ACP 160, NATO SUPPS & USAFER 60-17	IAW ACP 160, US SUPP-1 (C)	
2	IAW ACP 160, NATO SUPPS	IAW ACP 160 US SUPP-1 (C) ANNEX A	
3	AS DIRECTED BY ATC	2000 (BERMUDA: 2100)	AS DIRECTED BY ATC OTHERWISE IAW ACP 160 US SUPP-1 (C)
4		KEYED AND ON	

NOTE: At the discretion of unit commander, Mode 4 may be left off for local training missions.

Figure 6-1. Worldwide IFF Chart.

6-36 through 6-45. Not Used

6-46. Passengers. (Applicable to ARF units only when operating under 23 AF mission identifiers.) DOD 4515.13-R, Air Transportation Eligibility, will be adhered to when determining the eligibility of passengers aboard all aircraft. In no case will the provisions contained therein be circumvented to provide personal benefit or unauthorized preferential treatment of certain passengers.

Twenty-Third AF aircraft are not equipped with passenger services and comfort facilities as in other MAC aircraft. Passengers desiring space available transportation aboard 23 AF aircraft must be apprised of the inflight inconveniences they can anticipate.

a. Space-available passengers may be transported on deployments, redeployments, training missions, survival school vector missions, and ferry flights, if properly manifested and authorized IAW MAC, AF, and DOD directives. Passengers may fly on any operational mission when the transport of passengers is an integral part of the mission (e.g., transport of investigators to a crash site, ingress of simulated survivors/hostile forces to a SAREX area for exercises, etc.) and when not prohibited by this or other regulations.

b. Passengers will not be carried on training missions involving emergency procedures, aerial refueling, low level, NVG, or night water hoist operations. Wing CC/mission commander (ARF wing/group/CC for ARF units) approval is required to fly passengers on aerial refueling, low level, NVG or night water hoist missions.

c. Flight Clothing Policy:

(1) All crew chiefs and maintenance/logistic support personnel will wear Nomex flight gear when flying on MAC helicopters.

(2) Passengers on administrative support flights are not required to wear Nomex R flight gear if the flight does not involve hazardous flight envelopes (i.e., low level). Passengers will wear Nomex gear if the mission includes any tactical or special mission events that involve hazardous flight envelopes. Not applicable to team members performing SOF mission. (Passengers will wear Nomex gear during cable route surveys.)

6-47. Utilization of Civilian Law Enforcement or Medical Personnel. Civilian law enforcement or medical personnel may be required to perform duties at an incident site. These duties may include death determination or human remains removal. Local and/or international laws may affect mission prosecution and should be reviewed prior to deployment pickup of civilian personnel. Units will cover the local restrictions in their chapter 10, Local Operating Procedures. The primary method of deploying or recovering civilian law enforcement or medical personnel is by landing. Civilian law enforcement or medical personnel may be deployed and recovered by rescue hoist provided all other transport resources have been examined and determined to be inadequate for the incident area objective.

a. Prior to rescue hoist deployment, civilian law enforcement/medical personnel will be briefed on:

(1) Rescue devices to be used.

(2) The pilots intentions during an aircraft emergency:

(a) Engine failures.

(b) Hoist malfunctions.

(c) Loss of communications.

(d) Alternate pickup areas.

(3) Use of the AN/PRC-90 radio set.

(4) Survival vest content/usage.

b. The following constraints apply:

(1) Pararescue personnel, medical technicians, or an aircrew member should accompany the civilian personnel on the hoist provided weight limitations of the hoist are not exceeded.

(2) Maintain the lowest hover possible.

(3) A survival vest will be worn when available.

c. Mission approval authorization:

(1) The Wing Commander or Director of Operations approves the mission after the provisions of chapter 17 of this regulation are reviewed which explain human remains removal policies (including ARF).

(2) The Air National Guard Group Commander, Director of Operations, or Air Commander will approve missions, as specified.

(3) Approval authority to carry civilian law enforcement or medical personnel on SAR/MEDEVAC missions may be delegated to aircraft commanders under certain circumstances. If the aircraft commander determines that passengers are essential for the successful completion of the mission, and they are unable to contact their controlling agency for approval, passengers may be carried on that segment of flight requiring their presence.

6-48 through 6-50. Not Used

SECTION F—DEPARTURE

6-51 through 6-57. Not Used

SECTION G—EN ROUTE

6-58. Oxygen Requirements. MAC helicopters may operate between 10,000 and 13,000 feet MSL without supplemental oxygen for a maximum of one hour when mission requirements dictate. (Authority: HQ USAF/XOOFSA letter, 13 February 1975, Waivers to AFR 60-16.)

6-59. Flight Progress. During IFR operations use available navigational aids to maintain course centerline and positive fixing of the aircraft's position. Immediately report malfunctions or loss of navigation capability which degrades centerline accuracy to the controlling ARTCC.

6-60. Radar Advisories. During normal VFR operations, radar advisory service will be used to the maximum extent possible.

6-61. CIRVIS (JCS Pub 6, Volume V) and Other Reports. Report all vital intelligence sightings from aircraft as indicated in the FLIP Planning or FLIP En Route Supplement.

a. Inflight Harassment or Hostile Action Against MAC Aircraft. Aircraft subjected to harassment or hostile action by foreign aircraft will contact the nearest USAF air or ground voice facility and report pertinent information. Include identification of the aircraft by nationality, type, insignia, or any other identifying features noted, position, heading, time and speed of the MAC aircraft when harassed, and the type of harassments. Request relay of the report to the nearest CCC. Attempt direct contact with the CCC.

b. Continental United States Airborne Reconnaissance for Damage Assessment (CARDA). Aircrews observing any apparent nuclear detonation (NUDET) damage within the CONUS will report the observation immediately, using the GLASS EYE report format. Contact either a NORAD radar or air defense control (GCI) facility using the collective call sign "Air Defense Radar" or contact any FAA or military communications facility and request they relay the report to NORAD radar or GCI facility. If contact cannot be made by any of the above methods, attempt contact with a CONUS aeronautical station on assigned HF or UHF frequencies.

Glass Eye Report:
Item 1 Mission Identifier
Item 2 Date and time of observation (GMT)
Item 3 Apparent ground zero in latitude and longitude and base or location name
Item 4 Radius in NMs and tenths of NMs of moderate damage (i.e., wood utility pole blown down). Extent of radius should be only to point of 50 percent blow down.
Item 5 Crater: Yes or No
Item 6 Remarks: Include any significant remarks, essential elements of information (EEI), or any requested information.

NOTE:*Mission identifier will be the first letter and last two digits of the aircraft's call sign plus the letter "A" (ALPHA). Example: MAC 62001 would use "M01A." Example, (Communications facility) "This is MAC 62001 with a GLASS EYE Report." (If communications facility is not a NORAD radar or GCI facility, add "Request relay the following to any NORAD radar or GCI facility.")

Item 1 M01A
Item 2 091545Z
Item 3 3805N/7635W _____AFB
Item 4 2.0
Item 5 No
Item 6 Extensive damage to base. Hospital totally destroyed. Fires burning uncontrolled. Submit a GLASS EYE Confirmation Report as soon as possible after landing from a mission, whether or not an airborne report was made. Address the report to: NORAD COC, Cheyenne Mountain Complex CO/BSSC; NORAD ALCOP, Malmstrom AFB MT/BSSC; and AFEOC, Ft Ritchie MD/CCC. Format is the same as above.

6-62. Inflight Meals. For extended overwater flights the aircraft commander and the copilot will not consume inflight meals within one and one-half hours of each other during flight. The meals should consist of different menus.

6-63. Communications. HF communications provide an added capability to communicate with controlling agencies when normal UHF or VHF communications are impossible. When HF communication is required for en route air traffic control, comply with the following:

a. As soon as practicable after takeoff, the aeronautical station will be contacted on the recommended or assigned frequency.

b. Do not proceed beyond UHF or VHF range if HF contact cannot be established, unless fixed-wing escort is assured.

6-64. Inflight Emergency Procedures. Deviations from directives that may occur as a result of an emergency will be reported by the aircraft commander IAW AFR 60-16 or this directive.

a. Notification of Controlling Agencies. As soon as practicable after completing the aircraft emergency action checklist, furnish the controlling agency and appropriate CCC a description and extent of the difficulty, assistance required, intentions, and any further pertinent information.

b. Conference SKYHOOK:

(1) A conference SKYHOOK is initiated by, or with the concurrence of the aircraft commander when conditions require additional expertise.

(2) The conference is convened at the lowest level where expertise is available. It will not be elevated for the purpose of keeping the next higher echelon informed.

(3)The aircraft commander will provide the following information when time permits:

(a) Description of the situation to include actions taken by the crew and intentions of the aircraft commander.

(b) Fuel on board and hours of endurance
(c) Position
(d) Altitude and flight conditions
(e) Number of personnel on board
(f) Qualification of aircraft commander (IAC, FEAC)
(g) Planned landing base
(h) ETA landing base
(i) Expertise desired

c. Termination of Emergency Phases. Notify the appropriate agencies when no further special assistance is required.

6-65. Forced or Precautionary Landings. The helicopter has a unique ability to land nearly anywhere, which provides the aircrew a tremendous safety advantage. If the crew becomes doubtful of the helicopter's airworthiness or encounters hazardous weather conditions, they should execute a precautionary landing, provided that in the aircraft commander's estimation, the landing conditions are not more hazardous than the inflight problem. Aircraft security and accessibility for maintenance are secondary considerations to aircrew safety. Report all precautionary landings through appropriate chain as soon as communications are established.

a. Forced or Precautionary Landings Due to Inflight Malfunction:

(1) When the forced or precautionary landing occurs at an Air Force base and the cause has been investigated, corrected, and inspected by qualified maintenance personnel IAW applicable directives; and further, the aircraft commander has determined that no operational hazards exist at the departure base or en route, the aircraft commander may continue flight.

(2) The unit commander's approval is required prior to further flight when the host base commander transfers maintenance responsibility to the crew, or when the precautionary landing occurs at a location where qualified USAF maintenance is not available.

(3) In ths event a forced or precautionary landing occurs at a location where communications are not available, the following procedures apply:

(a) Remain at the landing site and await assistance if the aircraft commander determines the aircraft is not safe for flight.

(b) If the aircraft is safe for flight, the aircraft commander may authorize further flight.

(c) If a greater hazard exists to the crew or aircraft at the landing site, then continue to the nearest safe landing area. The decision to resume flight under these circumstances may be based on a thorough evaluation of all the hazards and risks involved.

b. Precautionary Landings Due to Weather:

(1) If deteriorating weather is encountered during VFR operations, consider a precautionary landing as

a viable option in addition to course reversal, command deviation or continuing under IFR.

(2) Further flight may be authorized by the aircraft commander after a precautionary landing for weather. Make a reasonable effort to notify appropriate agencies of the precautionary landing and to determine additional weather information.

6-66. Fuel Dumping. Do not initiate fuel dumping except for life and death rescue missions, water recovery of target drones, emergencies, and exercise missions. Aircraft are authorized to dump fuel during 23 AF or higher approved exercise missions only to prevent a greater amount of fuel being expended by participating aircraft. Weight adjustment except during emergencies will normally not be made below 3,000 feet AGL and over agricultural or populated areas.

6-67. Methods of Communication. Methods of communication used to relay messages are radios, hand or ground signals, message streamers or the loud hailer. These methods of communication must be briefed prior to mission execution. Confirmation of any message must be received prior to any action of the aircrew (i.e., dropping equipment or leaving the area). The rescue hoist may be used as a communication device only after all other means of communication have been exhausted, and only when necessary in life or death situations or to determine if ons exists.

a. Standard hand and ground signals, contained in AFM 64-2, appendix C, and IFR supplements or light signals contained in chapter 31 should be used in cases of radio failure.

b. Message streamers (NSN 1670-00-797-4495) should be dropped separately and not attached to other equipment. Drop the message in an area easily accessible to ground personnel.

6-68 through 6-70. Not Used

SECTION H—ARRIVAL

6-71. Briefing. Prior to descent and approach, brief all crewmembers on the intended approach procedures. During IFR flights, brief items using the instrument approach briefing guide. During operational missions, use the applicable operational checklist. For all descents and approaches, the pilot not flying the aircraft, and other crewmembers as appropriate, will assist in performing the approach as briefed and promptly report deviations.

6-72. Instrument Approach Minimums:

a. Approach category rules for helicopters in FLIP apply. If higher approach speeds are used, use appropriate minimums for that airspeed/category.

b. Helicopters flying a fixed-wing approach, to include circling approach procedures, may use one-half the published visibility minimums for the category being flown, but it may not be reduced to less than 1,200 feet runway visual range (RVR) or one-quarter mile.

EXCEPTION: When RVR is reported as a "less than value" (Example: RVR10-), one-half prevailing visibility (PV) is used to determine required visibility.

c. The visibility minimums for "copter only" approaches are used as published (cannot be cut in half like fixed-wing minimums). Copter approaches may be flown using "visibility only" criteria. The approach is based on an airspeed not exceeding 90 knots.

NOTE: Destination forecasts for intermittent changes in ceilings and visibilities are informative only. Pilots should be aware of these conditions, but they are not restrictive for filing purposes.

6-73. Weather Below Minimums. If the reported ceiling is below the minimum for the approach, but the visibility value is at or above the authorized minimums, before initiating an en route descent and approach, ensure fuel remaining is sufficient to accomplish the en route descent and approach, missed approach, and flight to alternate with appropriate reserves.

a. When advised before tbe final approach fix that weather conditions are below landing minimums, and a new or amended clearance has not been received, continue to the final approach fix, then maintain the final approach fix altitude or the lowest altitude restriction published on the missed approach procedure, whichever is lower, to the missed approach point and execute the published missed approach.

b. When advised, after the final approach fix, that weather conditions are below landing minimums, level off; or if a lower altitude is required to comply with published missed approach procedures, descend to that altitude, then proceed to the missed approach point and execute the published missed approach.

c. Radar Approaches. If advised that airfield is below landing minimums after initiating descent on final approach, level off immediately and continue to follow the controller's heading instructions.

6-74. Instrument Approach Procedures:

a. During IFR operations, when PAR or ILS is available and can be operational upon arrival at destination, make a precision approach for all night landings and during periods of marginal weather, except when mission requirements otherwise dictate. When nonprecision approaches are flown, the pilot not flying the aircraft will make use of available precision approach aids to monitor the final approach whenever practical.

b. Pilots are authorized to use the following publications if an acceptable DOD FLIP (Terminal Approach) is not available:

(1) Jeppesen
(2) National Ocean Survey
(3) Host government instrument approaches. These approaches must be approved by wing/DO/mission CC, or ARF/DO, as appropriate. Approval will include minimums for the approach.

6-75. Radar Altimeter Procedures. Normally, the radar altimeter is set at the appropriats autorotation flare altitude. During night VFR operations above 500 feet AGL, the radar altimeter should be set at 500 feet. During descent, the radar altimeter may be reset to the appropriate autorotative flare altitude or other settings at the pilot's discretion

(i.e., hoist, sling, low level, etc.). Recommended setting is 80% of the height you intend to fly. For instrument approaches, set the radar altimeters to the appropriate HAT/HAA prior to the FAF.

6-76. **Wake Turbulence Avoidance.** Pilots will be familiar with the wake turbulence avoidance procedures in FLIP and apply these procedures and distances, insofar as possible, during IFR and VFR operations.

6-77. **Power Available Check.** Perform a power available check prior to a hoist recovery or remote area operation or any time use of near-maximum power is anticipated. When not prescribed in the appropriate flight manual, perform the power available check as follows using maximum RPM: First, establish the preselected conditions (i.e., airspeed, altitude, and OAT) for which power has been precomputed; then increase collective to ensure that the precomputed power is available. It may be required to check one engine at a time not to exceed engine or transmission limitations (NA for UH-1N). Maintain rotor speed as prescribed by the flight manual during the check. Perform a power check as near as possible to the same pressure altitude and OAT conditions of recovery site. Perform the power available check either en route to, or at the recovery site and prior to the low recon. Compare maximum power available with (a) power required for OGE, or maximum hover height if OGE is not available, (b) and power required for the intended hover height(s). This comparison determines the power margin for the operation. When power available is within 10 percent of power required a second aircrew member will reconfirm power requirements with tabulated performance data (if available).

6-78. **Power Required.** Power required charts are based on having ground effect. When making a landing to a site that is less than the diameter of your rotor system, such as a pinnacle or ridge line, aircrews must ensure sufficient power is available. The degree of slope also affects power required due to loss of ground cushion.

a. When landing to a surface area smaller than your rotor diameter, such as a pinnacle, power for an OGE hover should be available.

b. When landing to an area where the flat surface is not at least two rotor diameters, power for a 20-foot hover should be available. (This is an approximate power requirement to provide a margin of safety.)

c. If power requirements are not available, either lighten the helicopter, locate a more suitable landing site, or abort the mission.

6-79 through 6-80. **Not Used**

SECTION I—POST-FLIGHT

6-81. **Customs, Immigration, and Agriculture Inspections:**

a. Obtain Customs, Agriculture, and public health clearance, as required, prior to opening any doors other than the crew entrance door or enplaning and deplaning personnel.

b. Proceed directly from the aircraft to Customs, Immigration, or Agricultural Inspection for processing at those stations where Federal or local inspections are required. The loadmaster or the aircraft commander completes the necessary forms before reporting to inspectors.

c. After clearing with border clearance agencies, the loadmaster will return to the aircraft for offloading and other post-flight procedures.

d. All crewmembers will obey foreign or host country laws and customs as prescribed in the FCG.

e. US military aircraft are sovereign instrumentalities. When cleared to overfly or land in foreign territory, it is US policy to assert that military aircraft are entitled to the privileges and immunities which customarily are accorded warships. These privileges and immunities include, in the absence of stipulations to the contrary, exemption from duties and taxation; immunity from search, seizure, and inspections (including customs and safety inspections); or other exercise of jurisdiction by the host nation over the aircraft, personnel, equipment, or cargo on board. USAF aircraft commanders will not authorize search, seizure, inspection, or similar exercises of jurisdiction enumerated above by foreign authorities except by direction of HQ USAF or the American Embassy in the country concerned.

(1) Aircraft commanders will not permit the inspection of their aircraft by officials of any foreign government. If requested to do so, the aircraft commander/crew will deny access and seek aid from the senior MAC representative or US Embassy or consulate within the host nation. Customs or other officials will be informed of the above policy and requested to confirm their request through their own government and with US Department of State representatives. If necessary, the aircraft will be sealed by the crew and the crew entered into crew rest, departure intentions will be cancelled, until resolution of the matter by appropriate authority. Communications by the fastest means available will be used to inform command and control facilities should this situation occur.

(2) When confronted with a search request by foreign authorities, aircrews should consider the following procedures:

(a) In most cases, search attempts may be stopped by a statement of the aircraft commander to the foreign official(s) that the aircraft is a sovereign instrumentality not subject to search without consent of HQ USAF or the Chief of Mission in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities who may honestly, but mistakenly, believe they have authority to search USAF aircraft.

(b) If foreign authorities insist on conducting a search, the aircraft commander must negotiate to delay the search until contact is made with HQ USAF/XOXXI or the appropriate embassy. The aircraft commander should unequivocally state that he has no authority to consent to the search and that he must relay the foreign request to these agencies for decision. The aircraft commander should then notify these agencies of the foreign request by the most expeditious means available. Thereafter, the aircraft commander should follow instructions provided by the appropriate embassy and HQ USAF.

(c) If foreign officials refuse to desist in their search request, the aircraft commander should indicate that he would prefer to fly the aircraft elsewhere (provided fuel and mechanical considerations permit a safe departure) and request permission to do so.

(d) If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the aircraft commander should state that he protests the course of action being pursued and that he intends to notify

both HQ USAF and the appropriate American Embassy of the foreign action. The aircraft commander should then allow the foreign agents on board the aircraft, without physical resistance, and thereafter report the incident to HQ USAF and appropriate embassy as soon as possible.

(e) In all instances, specific instructions may be briefed because of sensitive cargo or equipment. These instructions and applicable provisions of classified supplements to the foreign clearance guide should be followed where applicable.

6-82 through 6-88. Not Used

SECTION J—DEBRIEFING REQUIREMENTS

6-89. Maintenance Debriefing. As soon as possible after arrival, the aircraft commander and other pertinent crewmembers, if required, will debrief maintenance personnel on the condition of the aircraft engines, avionics equipment, and all installed special equipment (only the AC is required for alpha one aircraft). Make the following entries in the AFTO Form 781A when appropriate:

a. "Aircraft subject to salt spray" when flown below 3,000 feet over salt water, except for takeoffs and landings.

b. "Hoist and (type rescue device) used in salt water."

6-90. Crew Debriefing:

a. Training Missions. The aircraft commander, instructor, or flight examiner will conduct the debriefing and complete the appropriate documentation.

b. Search Missions. The debriefing of search crews is as important as the briefing. A careful interrogation and evaluation of search effectiveness by the debriefing activity and search crew is necessary. The debriefing should take place immediately after the return of teams or aircrews from a sortie.

c. Operations Under Combat Conditions. Each aircrew participating in operations under actual combat conditions will participate in an intelligence debriefing. The debriefing requirements of the supported Air Force component command will be adhered to:

(1) Unit commanders will ensure that provisions are made with the appropriate intelligence agencies for the timely debriefing of MAC aircrews participating in combat support operations.

(2) In the event that the component command being supported does not provide a debriefing form, use MAC Form 195 for debriefing aircrews participating in combat support missions. This form provides the information needed to complete the intelligence reports required by the directives of HQ USAF and the Air Force component command being supported.

(3) Any aircrew possessing intelligence information that should be reported under the provisions of JCS PUB 6, volume V, will be debriefed.

(4) Commandera will ensure that all aircrews are debriefed, as necessary, immediately following a combat or combat support mission during which any tactics or procedures were observed that would directly affect MAC operations.

(5) Ground Fire Incidents. If not provided for by the Air Force component command, aircraft commanders of 23 AF aircraft encountering ground fire will submit an immediate airborne report to their controlling agency followed by a ground fire incident report to the local intelligence debriefing agency immediately after landing.

d. Other Missions. The aircraft commander of each mission has the responsibility of affording to each crewmember the opportunity to discuss unusual aspects of the mission. Debriefings may be formal or informal as the situation requires. Complete the appropriate forms and ensure that they are reviewed by the commander or operations officer as soon as practical after mission accomplishment.

e. Jamming and Interference. All aircrews and other radio users will be familiar with the procedures for reporting incidents of meaconing, intrusion, jamming and interference (MIJI). Report MIJI incidents IAW AFRs 55-3. Info 23 AF/DOXT on all MIJI reports.

6-91 through 6-95. Not Used

SECTION K—MISCELLANEOUS PROCEDURES

6-96. Hazardous Cargo Procedures. Normally, 23 AF aircraft will not transport dangerous cargo. Should an aircraft be called upon to transport such cargo, consult AFR 55-14/AFR 71-4.

6-97. Border Clearance. Due to the local nature of helicopter operations, only infrequently do helicopters require border clearance. In the event that such clearances are required for deployments, consult MACR 76-1, volume I, chapter 16. For urgent missions which preclude adequate preparation, the OC will obtain necessary clearances and waivers.

6-98. Insect and Pest Control (Aircraft Spraying):

a. Responsibility. Aircraft commanders will ensure required spraying is accomplished. See USAF Foreign Clearance Guide for foreign nation requirements. Certify the spraying on Customs Form 7507, General Declaration (Outward/Inward), or on forms provided by the country transited.

b. Spray all aircraft immediately before the last takeoff prior to entering:

(1) The US or its possessions from a foreign airport between 35 north and 35 south latitude (Japan excluded, and all Africa included).

(a) Aircraft that land in the US north of 35 north latitude need not be sprayed between 1 October and 31 March, unless the aircraft will remain in the US and immediately proceed south of 35 north latitude.

(b) The US Public Health Service may require spraying not provided for above, for emergency purposes or special requirements (see USAF Foreign Clearance Guide for exceptions).

(2) The State of Hawaii, to include flights originating in the CONUS.

(3) A foreign area, according to the requirements of the country concerned or of the USAF. (See USAF Foreign Clearance Guide for individual country requirements.)

c. Use insecticide, Aerosol Resmethrin 2 percent, NSN 6840-00-140-7930 (or equivalent), to spray the aircraft.

(1) Direct the nozzle toward the ceiling of the compartment or space being sprayed. Do not spray any plastic surface or allow the spray to wet it.

(2) Spray spaces inaccessible from within the aircraft after completely loading fuel, baggage, cargo, and passengers, including wheel wells, and other similar spaces.

(3) Spray the cargo compartment, flight deck and other spaces accessible from within the aircraft after the crew is aboard and all doors, windows, hatches, and ventilation openings are closed. Spray for 20 seconds.

d. Responsibility of Aircraft Commander Inflight. When seeing any insect or rodent infestation of the aircraft inflight, notify the destination CCC, base operations, or airport manager of the situation before landing so the proper authorities can meet the aircraft.

e. Procedure at Aerial Port of Debarkation. Do not open cargo doors or hatches except to enplane officials required to inspect the aircraft for insect or rodent infestation. Do not on/offload until the inspection is completed. This procedure may be altered to satisfy mission or local requirements, as arranged by the base air terminal manager.

6-99. Procedures for Silent Running or Semi-Secure Operations. Silent running and semi-secure routing procedures are designed to permit the movement of MAC aircraft with minimum transmission of inflight data and air/ground communications. The procedures will be directed by appropriate mission directives or CINCMAC operation orders. These missions will operate within the MAC command and control system; however, special modifications may be necessary to ensure security. The degree of operational security will dictate either complete silent operations or modification of normal operating procedures. Missions using these procedures may be conducted to any area of the world. Specific routes, corridors, destinations, etc., will be fully briefed during aircrew premission planning and reviewed during the mission briefing prior to departure. Brochures will be provided to all aircrews involved in this procedure detailing routes, airspeeds, altitude, and communication restrictions and requirements. Emergency actions, to include breaking radio silence, will be reviewed by all agencies prior to mission execution.

Chapter 7

AIRCRAFT SECURITY

7-1. General. This chapter provides guidance on aircraft security and unlawful seizure (hijacking) of MAC aircraft. Aircrew personnel will actively resist all attempts to hijack a MAC aircraft. Resistance may vary from dissuasion to direct physical confrontation, including the use of weapons. MAC aircrews will not release information concerning hijacking attempts or identify armed aircrew members to the public.

7-2. Not Used

7-3. Procedures. The planning agency must ensure that adequate en route security is available. Aircraft commanders are best able to determine what protection is needed. The amount of protection required will vary, depending on the location and ground time. Aircraft commanders will receive a threat assessment and security capability evaluation briefing at home station, and receive updates at en route MAC CCCs. Assess the situation and take the following actions, if necessary:

a. Area Patrol. Request area patrol coverage from local security forces. If local authorities request payment for this service, use AF Form 15, USAF Invoice.

b. Aircrew Surveillance. Direct armed crewmembers to remain with the aircraft and maintain surveillance over aircraft entrances and activities in the vicinity of the aircraft.

c. Departure Without Crew Rest. If local security forces are unacceptable/unavailable and the crew is not augmented with security police, the aircraft commander may waive crew duty time limitations and depart ASAP for a base listed as reliable.

d. Unauthorized Entry. If, in the aircraft commander's judgment, the aircraft needs to be locked and sealed to detect unauthorized entry:

(1) Use an aircraft ground security locking kit. Helicopter aircraft commanders will ensure that their antitheft device is installed IAW class 1B mod H-53-013, H-3-029, or applicable 2-1 series tech order for H-1 helicopters. The UH-60A will be secured using the airframe door locks.

(2) Secure the hatches and doors in a manner that will indicate unauthorized entry; for example, tape inside hatch release handles to the airframe so that entry pulls the tape loose. Close and seal the main crew entrance door or left troop door using a metal (box car) or other controllable devices to identify forced entry. Wipe the immediate area around the seal clean to help investigate forced entry. If the seals are damaged or have been tampered with, notify the appropriate local authorities and the nearest ops center and inspect the aircraft thoroughly.

(3) Coordinate with the local base ops/MAC representative on procedures for servicing the aircraft while the crew is away.

7-4. Protective Standards for Aircraft Carrying Distinguished Visitors (DVs):

a. Applicability. This paragraph applies specifically to aircraft transporting DVs code 4 or above.

b. MAC Bases. Special crew procedures are not required at MAC bases. Security will be provided.

c. Non-MAC Bases. Aircraft commanders are responsible for aircraft security at en route stops.

(1) DOD Installations. Notify the base security police of estimated arrival and departure times. Request continuous security surveillance during the entire ground time. If the installation is unable to comply, arrange for the best protection available. At USAF installations, request security police provide protection IAW AFR 125-37, chapter 9.

(2) Non-DOD Installations. Contact the airport manager or installation commander to arrange for aircraft security. If available security is inadequate, purchase additional security using AF Form 15, USAF Invoice.

d. Locking or Sealing. Lock or seal the aircraft during all RONs.

7-5. Arming of Crewmembers (Not applicable to ANG Units). Do not routinely arm helicopter aircrew members. HQ MAC, 23 AF, AFRES/DO for AFRES units, wing commanders and unit commanders may direct arming of crewmembers as deemed necessary by mission threat analysis. During all operations where machine guns and miniguns are on board, an aircrew member will be armed. Protect these weapons and other installed weapons (including pyrotechnic pistols) IAW AFR 125-37, chapter 7. If a crewmember is armed for the sole purpose of providing security for an aircraft weapons system, he may be armed with any approved Air Force side arm or M-16.

a. Issue. Before departing home station, obtain weapons, ammunition, lock and key. Present a current AF Form 523, USAF Authorization to Bear Firearms, for weapons issue. Crewmembers will be reissued the same weapon until the mission terminates at home station. If an armed crewmember must leave the crew en route, transfer the weapon to another authorized crewmember using AF Form 1297, Temporary Issue Receipt.

b. Loading and transfer of Weapons. Load and unload weapons at approved clearing barrels, if available. Do not use a hand-to-hand transfer of loaded weapons to another crewmember; place the weapon on a flat surface. Based on current threat analysis, the standard load configuration will be determined by the unit/CC.

c. Wearing of Weapons (for Anti-Hijacking/VIP Flights). Wear weapons in a holster, concealed at all times to protect the identity of armed crewmembers. Do not wear weapons off the flight line except to and from operations, armories, and other facilities associated with aircrew activities (e.g., base operations, fleet service, cargo/passenger terminals, flight line cafeteria/snack bars, etc).

d. Weapons Storage Inflight. Crewmembers will be armed before beginning preflight or onload duties. When no passengers are aboard, weapons may be stored in the gun box in flight. Rearm before landing. Weapons need not be unloaded before placing them in the gun box.

e. Crew Rest. During crew rest, store weapons in the most secure facility available, normally the base armory. If a weapons storage facility is unavailable or the country

prohibits/restricts the entry of weapons, secure firearms and ammunition in the gun box.

f. Aircraft Without a Gun Box. If an aircraft without a gun box must remain overnight at a location where a Government-owned storage facility is unavailable, use the nearest acceptable facility. Acceptable storage facilities are US/Allied military services armories, US Reserve/National Guard armories, and US civil law enforcement armories. If none of these are available, or the aircraft commander believes security of weapons may be compromised, secure the weapons in quarters, but one crewmember must remain with the weapons. In this case, turn the ammunition over to the aircraft commander.

g. Lost Key Procedures. If the key to the gun box is lost and weapons are locked inside, contact the nearest operations center. Normally, the same crew will stay with the aircraft until return to home station and a second key obtained to retrieve the weapons.

7-6. General Hijacking Guidance. A hijacking could create a serious international incident and jeopardize the safety of passengers and property. An aircraft is most vulnerable when the crew is on board, and the aircraft is ready for flight. Hijackers cannot be dealt with as if they are ordinary criminals. Some are mentally disturbed, emotionally unstable individuals for whom the threat of death is not a deterrent, but a stimulus. Delay tactics have been most successful in saving lives and property. Crews must resist all attempte to hijack their aircraft. Resistance may vary from simple discouragement to direct physical attack with weapons. Detection of potential hijackers before they board the aircraft is the best solution to the problem.

a. If the aircraft commander is not satisfied with the performed antihijack inspection or no inspection has been made, the aircraft commander will assume responsibility for accomplishment of the antihijacking inspection.

b. Medical facility commanders are responsible for hijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections before departure.

c. During exercises or contingencies in support of combat operations involving the movement of large groups of personnel, the unit being supported should manifest passengers, and perform an antihijacking inspection.

d. Passengers will not carry weapons or ammunition on their person or in hand carried baggage aboard an aircraft except by special agents and guards of the Secret Service or state Department, and other individuals specifically authorized to carry weapons.

(1) Take every precaution to prevent accidental discharge of weapons. If guards or couriers must clear their weapons, ask them to:

(a) Move to a safe, clear area at least 50 feet from any aircraft, equipment, or personnel before unholstering or unslinging their weapons.

(b) Clear weapons IAW standard safety procedures.

(2) Troops/deadhead crewmembers will not retain custody of ammunition on an aircraft, but will turn it in to the troop commander or aircraft commander.

EXCEPTION: Team members during SOF operations and airborne fire teams (AFTs) may retain unloaded weapons and ammunition. Weapons may be loaded at the direction of AFT leader when the tactical situation dictates.

(a) Troops may carry unloaded weapons and ammunition aboard the aircraft during combat operations. When the tactical situation dictates, weapons may be loaded at the order of the troop commander/CCT team leader.

(b) Dummy clips that can be easily identified may be loaded for training at the order of the team leader.

7-7. Ground Resistance. Well planned and executed actions by ground forces and the crew provide the best method to thwart a hijacking.

a. Initial Action. Delay movement of the aircraft to provide time for ground forces and the aircrew to evaluate the situation and coordinate their efforts.

b. Communications. Establish communications with ground agencies using radios, IFF/SIF equipment or any covert means available.

c. Delaying Actions. Continue to delay until, in the judgment of the aircraft commander, further delay may result in homicidal attempts by the hijacker. At this time, inform the on-scene commander. Final decision to discontinue delaying actions will be made by the highest ranking officer available (on-scene commander, wing commander, NAF commander, CINCMAC, AFRES/CV, or NGB/XO).

d. Positive Detainment. The aircraft will be detained or disabled when:

(1) Requested by the aircraft commander.

(2) Directed by CINCMAC or higher for national security.

e. Local Procedures. Review local ground support hijacking procedures at en route bases before departure. The local procedures of airfields under the operational control of non-USAF agencies (i.e., Navy, Army, etc.) may conflict with MAC policy but must be complied with.

7-8. Inflight Resistance. After an aircraft is airborne, success in thwarting a hijack attempt depends on the resourcefulness of the crew. Take advantage of any opportunity to regain control of the aircraft or influence the conduct of the flight.

a. Notify ATC of your situation immediately. If the hijacker does not permit the use of the radio and the aircraft is under positive control of an ATC facility, attempt to communicate by using the IFF/SIF.

b. Notify crew and passengers of the situation as soon as practical for maximum assistance against the hijacker.

c. Be as negative to all the hijacker's demands as possible. Initial response to the hijacker should leave the issue in doubt. Try to calm the hijacker. Get the hijacker to talk.

d. Convince the hijacker intermediate stops are necessary for fuel, maintenance, or other problems and these stops must be at US military bases because of incompatibility of fuel and starting units at other airfields. After landing, try to discharge passengers. Use the ground forces to regain control of the aircraft.

e. Give reasons for not complying with the hijacker's demands; e.g., inability to communicate with foreign sources (radio frequency or language problem), dangers from surface-to-air missiles, antiaircraft fire, or armed intercept by hostile aircraft.

f. Propose favorable alternatives; e.g., landing in a neutral rather than an unfriendly nation.

g. As a last resort:

(1) Simulate emergencies to deceive the hijacker into believing a forced landing is necessary.

(2) Use weapons against the hijacker.

7-9. Covert Communications. If in-the-clear radio transmissions are not possible:

a. To report "Am being hijacked," set transponder to mode 3, code 7500. When unable to change the transponder setting or when not under radar control, transmit a radio message which includes the phrase "(Aircraft call sign) transponder seven five zero zero."

b. Controllers will acknowledge code 7500 by asking the pilot to verify it. An affirmative response or no reply from the pilot indicates confirmation. Controllers will not ask further questions; they will flight follow, respond to pilot requests, and notify appropriate authorities.

c. When controllers receive a hijacking report in the clear, they assign Code 7500 to the aircraft. The pilot may still change to code 7700 later, if necessary.

d. After the start of a hijacking, the aircrew may indicate to the air traffic controller that in-the-clear communications are not possible (the hijacker is in the cockpit) by using the word "TRIP" after the aircraft call sign prefix (MAC "TRIP" 12345, TERRY "TRIP" 33). The controller should respond using the word "TRIP" in the aircraft call sign. Use of the word 'TRIP" in the aircraft call sign by the controller prior to its use by the aircrew asks the aircrew if clear communication is possible. In this situation, the aircrew response should include the word "TRIP" only if clear communication is not possible. After an aircrew has advised ATC that clear communication is not possible, ATC will limit radio transmissions to the minimum essential ATC functions until advised otherwise by the aircrew.

e. To report "Situation appears desperate; want armed intervention," change from code 7500 to 7700. When unable to change the transponder setting or when not under radar control, transmit "(aircraft call sign) transponder seven seven zero zero."

(1) Remain on 7500 for at least 3 minutes or until receiving controller confirmation of code 7500, whichever is sooner before changing to code 7700.

(2) Controllers treat aircraft squawking code 7700 and not in radio contact with the ground as having an in-flight emergency (in addition to hijacking) and will follow their appropriate emergency procedures.

f. To report "Situation still desperate; want armed intervention and aircraft immobilized," transmit "(aircraft call sign) flaps are down."

g. To report "Leave alone—do not intervene,." Transmit "(aircraft call sign) back on seven five zero zero" to emphasize that intervention is no longer desired.

7-10. Forced Penetration of Unfriendly Airspace:

a. Procedures in this paragraph should prevent hostile actions against an aircraft which penetrates the boundary of an unfriendly nation as a result of a hijacking. Comply with instructions received by radio or from an interceptor. Without instructions comply with the following before entering unfriendly airspace:

(1) Maintain an altitude above 10,000 MSL, if possible.

(2) Fly the most direct courses to the destination demanded by the hijacker unless the hijacker insists on another route.

(3) Transmit MAYDAY on 243.0, 121.5, or 2182.

(4) Squawk mode 3, code 7700.

b. Destruction of Classified Material. Try to destroy all classified documents and equipment aboard the aircraft before landing in an unfriendly nation.

COVERT COMMUNICATION SIGNALS

STEP	A to report	B take this action
1	am being hijacked	set transponder to Mode 3, Code 7500 and/or transmit "(aircraft call sign) transponder seven five zero zero."
2	in the clear communication not possible	use the word "TRIP" after the aircraft call sign prefix in communicating by radio with ground agencies. For example: MAC "TRIP" 12345...or TERRY "TRIP"33...
3	situation appears desperate, want armed intervention	change transponder from Mode 3, Code 7500 to Mode 3, Code 7700 and/or transmit "(aircraft call sign) transponder seven seven zero zero."
4	situation still desperate, want armed intervention and aircraft immobilized	"(aircraft call sign) flaps are full down
5	leave alone, do not intervene	If transponder was set to Mode 3, Code 7700, return to Code 7500. Transmit "(aircraft call sign) back on seven five zero zero."

Figure 7-1. Covert Communications Signals.

Chapter 8

OPERATIONAL REPORTS AND FORMS

8-1. General. Reports and forms applicable to the aircraft commander and/or all crewmembers are contained in this chapter.

8-2. AF Form 457, USAF Hazard Report:

a. Purpose. The USAF hazard reporting system provides a means for Air Force personnel to alert supervisors and commanders to hazardous conditions requiring prompt corrective action. A hazard is any condition, act, or circumstance that jeopardizes or may jeopardize the health and well being of personnel, or may result in loss, damage, or destruction of any weapons system, equipment, facility or material resource.

b. Procedure. Use AF Form 457 to report hazards. The mission kit includes copies of the form and are available at every Air Force base. Complete the form AF Form 457 and turn it in to the base safety officer where the hazard exists, or at the base of next landing if this is not practical. At other than home station, a duplicate will be returned so that the parent unit safety officer can begin follow-up action.

c. Hazard Reports. Transmit those requiring immediate action electronically, through channels, to the echelon capable of taking action.

d. Special Procedures for Hazard Reports Concerning Weather. Because of the impact weather has on air operations, the transient nature of weather conditions, and the short time that weather documentation is maintained, the following special instructions apply in reporting and processing weather service deficiency hazard reports.

(1) Normal pilot report (PIREP) procedures apply any time the weather is other than forecast.

(2) When an aircraft takes off and lands at the same USAF base (e.g., local training) and the aircrew believes a local weather station deficiency created a hazard to flight, debrief the weather forecaster on the conditions for which the hazard report is being submitted. Submit the hazard report, along with any supporting documentation, to the base safety officer for investigation.

(3) When an aircraft is on a point-to-point mission or operating from a non-USAF weather station base/airport and the aircrew believes that a weather service deficiency created a hazard to flight:

(a) Notify the landing base USAF weather station, or the nearest USAF weather station, by the quickest medium, that a weather hazard report is being submitted. The aircrew will supply:

1. Date, time, and place of departure.
2. Date, time, and place of landing.
3. Aircraft type, serial number, and mission identifier.
4. Name, organization of aircraft commander.
5. Brief description of hazardous condition.
6. Route flown or computer flight plan (CFP) identifier.
7. Altitudes flown.
8. Deviations required en route or destination.

(b) The aircrew will complete the front of an AF Form 457. The "TO" block will contain the aircrew's parent wing or independent squadron flying safety office. The aircrew will ensure that this hazard report (AF Form 457) is received at their parent unit within five days. Mail the hazard report if the crew will not return to home station within five days.

8-3. AF Form 651 Hazardous Air Traffic Report (HATR), (AFR 127-3):

a. Purpose. The USAF HATR program provides a means for Air Force personnel to report all near mid-air collisions and alleged hazardous air traffic conditions. This reporting system is designed to satisfy the nonpunitive aspects of the FAA/NASA aviation safety reporting system.

b. Reporting. Reporting under this program covers events that occur in air traffic and aircraft operations inflight which, in the observer's opinion, created a potential for injury to personnel or damage to aircraft resulting from:

(1) A near midair collision (NMAC).

(2) A hazardous air traffic situation in which there was less than the required separation between aircraft.

(3) Communications or air navigation aids that contributed to the development of a hazardous air traffic situation.

(4) Any publication, directive, or procedure that could (or did) contribute to the development of a hazardous air traffic condition.

(5) Personnel and facilities (e.g., DOD, FAA, contractors, or host nation) that contributed to a hazardous air traffic condition.

(6) Any other condition that the observer considers appropriate to report under this program.

c. Procedures:

(1) Report any of the conditions in paragraph (2) with the safety office advisory to the organization which the hazardous condition occurred and a copy to the home base safety office.

(2) If possible, make an airborne report of each NMAC to the nearest air traffic agency (e.g., center, FSS, control tower, or aeronautical radio station), and give the following information as appropriate:

(a) Identification or call sign.

(b) Time and place (radial or DME of NAVAID, position relative to the airfield, and so on) of the occurrence.

(c) Altitude or flight level.

(d) Description of the other aircraft.

(e) Statement that a written NMAC report will be filed upon landing.

NOTE: FAA must know if an official report is being filed.

(3) File the HATR as soon as possible (within 24 hours) using any available means of communication. Normally, it should be filed at the USAF base operations office at the landing airport. However, if this is impractical, and if communications permit, notify the safety office of the USAF base where the report condition occurred, the safety office at the home base, or as prescribed by the

oversea major command. In any case, provide the base or wing safety with all of the available information needed to prepare AF Form 651.

8-4. Reporting Aircraft/Personnel Mishaps:

a. Responsibilities. Aircraft commanders will notify the appropriate MAC or ARF authorities of any mishap involving their aircraft or crew.

b. Definition of Air Force Mishap. An unplanned event which causes or creates a potential for damage to Air Force equipment or property, damage to public or private property, injury or occupational illness to Air Force military or on duty civilian personnel, or injury to non-AF personnel as a result of an AF operation.

NOTE: The following is a combination of AF and MAC requirements. Aircraft commanders should not attempt to classify mishaps, but they must notify a MAC safety office as soon as possible.

c. Reportable Mishaps. Report any occurrence which results in damage to the aircraft or injury to personnel on board the aircraft. Also report any damage to any other public or private property or equipment, or injury to any personnel, military or civilian, as a result of movements or actions by a MAC aircraft or crew. Reportable mishaps include:

(1) Physiological incident, defined as a physiological reaction, near accident, or hazard in flight due to medical or physiological reasons. This includes, but is not limited to:

(a) Proven or suspected cases of hypoxia.

(b) Carbon monoxide poisoning or other toxic exposure.

(c) Decompression sickness due to evolved gases (bends, chokes, neurocirculatory collapse), or severe reaction to trapped gas resulting in incapacitation.

(d) Hyperventilation.

(e) Spatial disorientation, distraction, loss or alteration of consciousness from any cause.

(f) Death of any crewmember during flight.

(g) Any ejection or extraction of any person from an aircraft.

NOTE: In the interest of safety, any person with knowledge of a physiological incident, as defined above, will report it to the nearest USAF base commander, flight surgeon, or medical officer who will ensure that it is investigated and officially reported.

(2) An actual forced landing.

(3) Inflight malfunction, flameout, failure, or required shutdown of an engine, regardless of damage.

NOTE: Intentional shutdowns for training, FCF, or other nonemergency purposes are excluded; however, report failure to restart.

(4) Engine case penetration by shrapnel from internal engine component failure.

(5) Engine case rupture or burn-through, engine compartment fire, or massive fual leakage.

(6) Malfunction of landing gear emergency extension system.

(7) Flight control malfunction (including flight control systems, autopilot systems and trim systems) resulting in unexpected hazardous changes of flight attitude, altitude, or heading.

(8) Directional control or brake malfunction.

(9) Loss of thrust sufficient to preclude maintaining flight at a safe altitude.

(10) Spillage or leakage of radioactive, toxic, corrosive, or flammable material from aircraft stores or cargo.

(11) Human Factors Related Situations. For example, misinterpretation of instruments; crew overload; e.g., tactile, aural, and visual input to the crew at a rate too fast to permit reasonable decisions based on the data received; or too many actions required in too short a period of time; or confusion of controls such as would be caused by adjacent switches where the actuation of the wrong switch could create a dangerous situation.

(12) Any occurrence which, in the judgment of the aircraft commander, constitutes a significant hazard to the crew or aircraft—such that a similar occurrence could result in injury or damage. This includes, but is not limited to, actual emergency conditions arising from the failure or malfunction of systems or components that are essential to safe flight.

d. Procedures. Report mishaps as soon as possible, but no later than immediately after landing, prior to entering crew rest. In all cases, retain a copy of all relevent information and turn it into your unit safety officer.

e. Required Information. The following information is required when a mishap occurs (see MAC Form 97 USAF Aircraft Mishap Report Worksheet): Exercise/operation code name

(1) Date, local time, and whether dawn, day, dusk, or night.

(2) Location of occurrence.

(3) Model and identification number of aircraft or equipment involved.

(4) Command and possessing organization.

(5) Personnel involved. Include name, rank, SSAN, AFSC, age, crew position, and phone number.

(6) Injuries. List name, age, AFSC, SSAN of all individuals injured.

(7) Narrative description. Give a concise, chronological description of facts and circumstances leading to the occurrence, action taken, and results. Describe any injuries and damage to aircraft or property.

(8) Weather at time and place of occurrence.

(9) Takeoff time and duration of flight.

(10) Altitude at time of occurrence, (if below 10,000 feet, show MSL/AGL).

(11) Gross weight and fuel for takeoff and landing mishaps.

(12) Life support equipment used.

8-5. Reports of Violations. Violations identified in AFR 60-16, and alleged navigation errors and border and air traffic control violations will be reported in the following format:

a. Include the following items:

(1) Factual circumstances.

(2) Investigation and analysis.

(3) Findings and conclusions.

(4) Recommendations.

(5) Actions taken.

(6) Attachments:

(a) Notification of incident.

(b) Crew orders.

(c) Statements of crewmembers (if applicable).

(d) Documenting evidence (logs, charts, etc.).

b. Send the original investigation report to arrive within 45 days to HQ MAC/DOV. Air Reserve Forces (ARF) units receiving alleged violations, while under the MAC operational control, will send the original investigation through applicable channels to arrive at AFRES/IGI or NGB/SE within 35 days. AFRES/IGI or NGB/SE will send the original investigation to arrive at HQ MAC/DOV within 45 days.

8-6. Not Used

8-7. POL, AVFUELS Transaction Document (DD Form 1898 and AF Form 1994). These forms, used for POL issues or defuels, are described in AFM 67-1, volume I, part three, and DOD 4140.25-M. Issues and defuels of aviation fuel are recorded on these forms at the time of issue or defuel. Aircraft commanders, or their authorized representatives, will sign the above forms in the "signature" space at the time of receipt or turn-in of aviation fuel. They will ensure that the line entries have been completely filled in, except for signature, by the hydrant or refueling unit operator. Give the aircraft identaplate, DD Form 1896, Jet Fuel Identaplate, to the POL attendant who will imprint the embossed information on the AF Form 1994, Fuels Issue/Defuel Document (DOD). Enter POL issue in the appropriate space of AFTO Form 781, part II, After verifying the amount of POL issued, sign the DD Form 1898, AvFuels Into-Plane Contract Salesslip, or AF Form 1994. Keep one copy of these forms in the AFTO Form 781. The other copy will be reviewed and certified by the operations officer and then sent to the base fuels office within two days.

8-8. AF Form 15/315. If normal Government service/supplies are not available, supplies necessary for the operation of MAC aircraft will be purchased, whenever possible, from contract vendors with the aircraft Identaplate and DD Form 1898 and AF Form 1994.

a. If the vendor will not accept the aircraft Identaplate, use an AF Form 15, United States Air Force Invoice, or AF Form 315, United States Air Force Avfuels Invoice, to pay for required supplies/services.

b. If the vendors require a signature on their form, and an AF Form 15/315 has been executed, write the statement "AF Form 15 or 315 EXECUTED" on the vendor's form.

c. Return two copies of the AF Form 15/315 to the operations officer at home station.

8-9. MAC Form 54, Aircraft Commander's Report on Services/Facilities:

a. Supply of Forms. The originating station will provide the aircraft commander sufficient copies of MAC Form 54 to cover intended stops for the mission.

b. Policy. Submit a station report when services rendered or conditions encountered are unsatisfactory or detrimental to efficient rescue operation; services rendered or procedures used are worthy of adoption for standard use by MAC organizations; or a performance rendered by a person (or persons) is commendable and deserves recognition.

(1) Complete all blocks of the station report and include the time, date, and place, along with names and duty titles of the people involved.

(2) Provide sufficient details on discrepanciec to identify the problem, if possible. Recommend corrective action, if appropriate.

c. Attempt to solve the problem by contacting appropriate supervisors. If the problem requires further action, submit a MAC Form 54 upon mission completion to the squadron commander.

8-10. MAC Form 196, Aircraft Commander's Report on Crew Member. The aircraft commander will prepare a MAC Form 196 on each crewmember whose performance was outstanding, below average, or unsatisfactory during a mission. Submit the report to the commander of the unit to which the crewmember is assigned or attached for flying. Explain outstanding, below average, and unsatisfactory grades fully in the remarks section.

8-11. MAC Form 43, MAC Transient Aircrew Facilities Report.

a. In order to monitor transient crew rest facilities, crewmembers will submit reports whenever they encounter unsatisfactory conditions or have suggestions for improvements.

b. Any MAC crewmember may submit a MAC Form 43 MAC Transient Aircrew Facilities Report. This report may be submitted whether or not an unsatisfactory item is included in the aircraft commander's trip report. Complete MAC Form 43 and send to HQ MAC/DEHH.