DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330-5000

AF REGULATION 60-16

10 December 1985

Flying

GENERAL FLIGHT RULES

This regulation prescribes general flight rules which govern the operation of Air Force aircraft flown by Air Force pilots, pilots of other services, foreign pilots, or civilian pilots. It applies to Air Force activities operating aircraft on loan or lease, to the extent stipulated in the loan or lease agreement, it also applies to Air National Guard and US Air Force Reserve units and members. Questions concerning this regulation may be addressed to the USAF Instrument Flight Center (USAFIFC/FD) Randolph AFB TX 78150-5001.

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Chapter 1

GENERAL INFORMATION

1-1. General Concepts:

a. US Air Force aircraft are operated on a worldwide basis under rules and procedures that may involve many standards and conflicting requirements.

b. Although the International Civil Aviation Organization (ICAO), an affiliate of the United Nations, helps to standardize and regulate international civil aviation, ICAO members are not forced to conform to its standards and recommended practices (SARP).

(1) Each member nation must, however, make known any ICAO procedure it takes an exception to and publish its alternate procedure. What that member does in modifying, rejecting, or conforming to ICAO standards constitutes that nation's rules of the air.

(2) The Air Force supports the activities of ICAO, and military mission permitting, complies with ICAO SARPs in international airspace over the high seas.

c. Each nation prescribes those rules which apply to operating aircraft in its sovereign airspace. The Federal Aviation Administration (FAA) prescribes these rules for the United States. It issues them as Federal Aviation Regulations (FAR). FARs are similar to ICAO SARPs, except that (unlike ICAO standards) FARs apply to both civil and military aircraft operations unless the FAA grants the military service an exemption or the FAR specifically excludes military operations.

d. Air Force pilots are governed primarily by FARs, and nothing in this regulation relieves the pilot of that responsibility. However, to provide a common reference source, this regulation attempts to consolidate ICAO SARPs, FARs, and those military directives that apply to operating Air Force aircraft.

e. For information on the changing requirements of a single ICAO member that are more restrictive than the procedures outlined here, refer to the appropriate Area Planning section of the Flight Information Publication (FLIP) Planning document.

1-2. Compliance With This Regulation:

a. This regulation, as supplemented by major commands (MAJCOM), governs the operation of Air Force aircraft:

(1) In the United States (including Alaska and Hawaii), its territories and possessions.

(2) In international airspace over the high seas.

(3) Over the sovereign territory of any foreign nation as modified by special notices and procedures published in FLIP. Theater commanders ensure that the contents of FLIP show the rules of each nation within their area of responsibility if those rules differ from this regulation.

b. Operations of US Air Force aircraft are also governed by procedures and special notices in FLIP, the USAF Foreign Clearance Guide (FCG), notice to airmen (NOTAM), regulations, manuals, technical orders, aircraft flight manuals, US Air Force and MAJCOM directives and air traffic control (ATC) instructions. (See attachment 1 for a list of pertinent directives.)

*c. A MAJCOM may supplement this regulation by publishing restrictions that will apply only to pilots or aircraft assigned or attached to that command. Send one copy of the supplement to HQ USAF/XOORF, Wash DC 20330-5054, and one copy to USAFIFC/FD, Randolph AFB TX 78150-5001.

*d. Air National Guard (ANG) units refer to ANGR 0-2 for specific guidance for applicability of this regulation and MAJCOM supplements hereto. The National Guard Bureau (NGB) performs functions for ANG units.

1-3. Energy Conservation. It is Air Force policy to conserve aviation fuel when it does not adversely affect training, flight safety, or operational readiness. Each MAJCOM will set up an energy awareness and conservation program to conserve energy consistent with mission requirements during ground and flight operation of Air Force aircraft.

1-4. Deviations and Waivers. Deviations from this regulation are authorized only:

a. When an emergency or special circumstance exists or for the protection of lives.

*b. When necessary to comply with a MAJCOM training directive, with prior HQ USAF approval. Send two copies of any command waiver request to HQ USAF/XOORF, Wash DC 20330-5054. If an operation requires a deviation from a FAR, obtain an exemption or waiver (see AFR 55-2) from the FAA administrator in advance. If a waiver is

relatively permanent, the MAJCOM will publish it in a supplement and cite the authority (for example, HQ USAF/XOORF letter subject, and date).

c. When the commander of an oversea MAJCOM believes it essential to carry out an assigned mission and comply with the air traffic rules of an assigned area.

d. When the waiver is essential to the defense of the United States because of military emergency or urgent military necessity. If circumstances require a deviation from a FAR, it must be arranged with FAA in advance. (HQ USAF advises the FAA of the miltary intention to deviate when a lack of time does not permit such prearrangement.) A MAJCOM may unilaterally authorize deviation from air traffic rules without prior FAA concurrence, if it considers the deviation "essential to the defense of the United States," and:

(1) There is no time to obtain approval from HQ USAF.

(2) FAA is notifed of military intentions.

NOTE: In the language of the Federal Aviation Act of 1958 dealing with military emergencies (49 U.S.C. 1348f), Congress recognized that precise guidance could not be written to cover all circumstances. However, the Air Force is expected to use its authority wisely, with due regard for the interests of civil aviation, and place authority for the decision at the highest appropriate level of command.

e. An ATC clearance is not authority to deviate from this regulation.

1-5. Reports of Deviations:

a. Deviations that arise from an emergency are reported by pilots to their immediate supervisor and commander within 24 hours of the incident. The pilot will furnish a detailed written report on request.

b. If an emergency causes the assignment of traffic priority—even though not deviating from this regulation—the pilot will make a written record of it, and will, upon request, send this record to the nearest FAA regional office.

1-6. Reports of Violations:

a. The commander will investigate any violation of this regulation, the FCG, FARS, or other governing directives so that corrective action can be taken.

*b. When HQ USAF requests an investigation, it will be conducted according to AFR 120-4. Each level of command validates the conclusions and states what action has been taken or is planned to prevent a recurrence of the violation. HQ USAF prepares the reply to agencies outside the Air Force.

1-7. Dimensional Unit. Except for visibilities (statute), all distances referred to in this regulation are in nautical miles (NM).

1-8. Improvement Recommendations:

a. Use AF Form 847, Recommendation for Change of Publication (Flight Publications), according to AFR 60-9, to send a proposed change through channels to the MAJCOM.

b. Recommendations not approved by MAJCOMs are returned to the initiating unit with an explanation of the nonconcurrence.

*c. MAJCOM approved recommendations are sent to USAF IFC/FD, Randolph AFB TX 78150-5001, within 45 days of receipt.

1-9. Disposition of Records. AFR 12-50, volume II governs disposition of records accumulated under this regulation.

Chapter 2

PREFLIGHT REQUIREMENTS

*2-1. **Preflight Planning.** When planning a flight, the pilot in command (each pilot in command of an aircraft in a formation) must be sure that aircrew or formation members know all of the appropriate procedures and available information that apply to the intended operation. This includes, but is not limited to the following information:

a. Appropriate sections of the flight manual.

b. NOTAMs.

c. FLIPs.

d. Alternatives available if the flight cannot be completed as planned.

e. Departure, en route, destination, and alternate weather observations and forecasts.

f. Fuel requirements.

g. Minimum safe altitudes for the planned route and terminal area.

h. Takeoff and landing limitations.

2-2. AF Form 70, Pilot's Flight Plan and Flight Log. AF Form 70 is the pilot's preflight and inflight worksheet. All column entries which are required for safe flight, and which can be determined during preflight planning, are made before takeoff. Use this form on each flight except:

a. For a flight conducted within 200 NM of the point of departure when preflight planning of control parameters (such as altitudes, headings, fuel consumption rates) would be impractical.

b. When the MAJCOM directs the use of a more detailed form, or when a navigator is a crewmember and maintains the flight log.

c. For helicopter flights conducted under visual flight rules (VFR).

d. When it would delay the departure of a priority mission (as defined by the MAJCOM) to make out the form.

NOTE: The "Miscellaneous Data" section of AF Form 70 may be overprinted when required by a local user, if the supply of forms in the original format is adequate to meet the needs of other users.

*2-3. **Computer Generated Flight Plans.** Units will use only MAJCOM approved and validated software designed to support mission planning for their specific aircraft when relying solely on the software. If software which has not been approved and validated by the MAJCOM is used (e.g., software development) to support mission planning, a MAJCOM approved methodology will be used to verify the results before flight.

*2-4. **Fuel Requirements:**

a. General Information. Before takeoff or immediately after inflight refueling, there must be enough usable fuel aboard the aircraft to complete the flight:

(1) To a final landing, either at the destination airport or the alternate airport (if one is required), plus the fuel reserve.

(2) To or between air refueling control points (ARCP) and then to land at the destination (or a recovery base if refueling is not successful), plus the fuel reserve.

b. Alternate Airport. When an alternate airport is designated because of the requirements in paragraph 8-5, weather conditions at the original destination will govern the preflight fuel computation.

(1) When the "visibility only" weather criterion in paragraph 8-4c is used to determine the suitability of the original destination, total flight plan fuel must include the fuel needed for an approach and missed approach at the original destination.

(2) When both the ceiling and visibility criteria in paragraph 8-4c are used to determine the suitability of the original destination, total flight plan fuel need not include the fuel required for an approach and missed approach at the original destination.

c. Fuel Reserve. This is the amount of usable fuel that must be carried on each aircraft, beyond that required to complete the flight as planned. MAJCOMs set these requirements for aircraft in their commands. If the command has not established reserves, carry enough usable fuel on each flight to increase the total planned flight time between refueling points by 10 percent or 20 minutes, whichever is greater. To compute fuel reserves:

(1) For reciprocating engine-driven aircraft and helicopters, use fuel consumption rates for normal cruising altitudes.

(2) For turbine-powered aircraft, use the fuel consumption rates which provide maximum endurance at 10,000 feet.

NOTE: If the MAJCOM authorizes holding (instead of an alternate airport) for a remote or island destination, do not consider the prescribed holding time as part of the total planned flight time for computing fuel reserve.

d. Minimum Fuel. This term means that the aircraft's fuel supply is so low that, when reaching its destination, it can accept little or no delay. This is not an emergency situation, but means that an emergency may occur if there is a delay. If the remaining usable fuel suggests the need for traffic priority to ensure a safe landing, the aircrew will declare an emergency.

***2-5. Weather Information.** Information about expected weather conditions may be the only basis upon which to base a pilot decision. To make this information as complete as possible, the pilot should take advantage of all weather services available.

a. Forecast Weather. As close to actual departure time as practical, the pilot must get enough weather information to decide what flight rules apply, whether the destination is suitable, and whether a given airport would be a suitable alternate.

(1) A verbal briefing is normally adequate. In this case, the pilot places the weather forecaster's initials in the weather block of DD Form 175, Military Flight Plan (or the remarks section of any other filed flight plan).

(2) DD Form 175-1, Flight Weather Briefing, must be available on request at any US military installation.

b. Updating the Weather Forecast. The pilot will get weather information updates on changing conditions that could affect the planned flight. The weather forecast may be updated at any time, by the best means available. In all cases, it should be updated far enough in advance so that the planned flight can be changed to allow safe completion.

c. No Weather Briefing Facility. Obtain weather and NOTAMs according to the FLIP for the area of intended operation. When filing inflight, obtain weather and NOTAM information from any appropriate facility.

d. Alternative Method. If weather and NOTAM information cannot be obtained by the above means, fly VFR to the nearest point where information can be obtained for the instrument flight rules (IFR) part of the flight.

***2-6. Briefings and Prohibitions:**

a. Briefings. The pilot in command (or formation flight leader) is responsible for the safe and orderly conduct of a flight. As a part of this responsibility, the pilot must make sure that each aircrewmember and passenger is verbally briefed on items that may affect safety or mission completion. On passenger-carrying aircraft, the operating command must supplement verbal briefings with printed information guides for passenger use according to the flight manual. Passenger briefings should include, but need not be limited to:

(1) Procedures to follow in an emergency.

(2) Use and operation of life support systems and equipment.

(3) Precautions and restrictions to be observed.

(4) Special procedures and instruction to use during training, formation, or operational missions.

(5) Prohibitions listed below.

b. Prohibitions. These prohibitions apply to each passenger and crewmember in US Air Force aircraft:

(1) Operation of portable radio receivers and transceivers and other electric or electronic devices (except watches, handheld nonprinting calculators, hearing aids, medically prescribed physiological instrumentation, and portable voice recorders when approved by MAJCOM) is prohibited aboard Air Force aircraft unless a specific military requirement exists, and the device has been tested, been certified interference-free, and been so labeled by Aeronautical Systems Division Deputy for Engineering (ASD/ENACE).

(a) Electric razors may be used only in power receptacles similarly tested and labeled. Cordless razors must not be used.

(b) MAJCOMs provide guidance on the use of other nonmission equipment aboard command operated aircraft.

(2) Explosive, flammable, and corrosive materials or materials with toxic or irritating fumes (see AFR 71-4 for information covering restrictions and packaging), unless approved by competent authority, are prohibited.

(3) Narcotics, marijuana and other dangerous drugs, unless approved by competent authority, are prohibited.

***2-7. Equipment Required for Flight:**

a. General Information. Each aircraft must have instrumentation that allows the pilot to assess engine performance, aircraft altitude,

attitude, speed, and heading, as well as equipment that provides two-way air to ground communications. In a tandem-configured cockpit, the instruments must work in the cockpit the pilot in command occupies. In most controlled airspace, the required instrumentation must include an operable transponder. Aircrews should consult FLIP General Planning for transponder requirements in the United States and FLIP Area Planning and Supplements for transponder requirements overseas.

b. Instrument Flight Rules (IFR). For flights that operate under instrument flight rules, the aircraft must have navigation equipment compatible with the ground facilities to be used, and the airspace in which the operations are conducted.

c. Instrument Meteorological Conditions (IMC). Flights conducted in IMC also require:

(1) Operative pitot heat.

(2) Operational icing-control equipment designed to cope with the type and severity of known or forecast icing conditions, except for a brief exposure when climbing or descending to an operating altitude above or below the icing condition.

d. Night. In addition to a above, an aircraft will not be flown at night unless it is equipped with operative position, anticollision, cockpit instrument, and landing lights. Each crewmember must also carry a flashlight that works. If the anticollision light fails, the aircraft may proceed to a stop where repairs can be made without undue delay.

NOTE: Helicopters equipped with searchlights that provide enough light for landing must have either an operational landing light or searchlight.

***2-8. Safeguarding Classified Equipment.** Commanders must take the necessary security steps to protect classified equipment on aircraft at installations under their jurisdiction. Commanders of transient aircraft make their own security arrangements when at a non-Air Force installation.

Chapter 3

FLIGHT PLANS

3-1. Flight Plan Requirements. A flight plan is required for all flights in Air Force aircraft.

3-2. Use of Flight Plans. Types of flight plans and their areas of application are listed in FLIP planning documents. A MAJCOM-approved form may be used instead of DD Form 175 or DD Form 1801, DOD International Flight Plan, for a local area flight (IFR or VFR) that ends at the base of departure, or at an installation under the operational control of the base of departure, provided that:

a. For an IFR flight, a locally produced form must meet the minimum flight plan information requirements for IFR flight and the format must be acceptable to the Air Route Traffic Control Center (ARTCC).

b. When the written flight plan (DD Form 175, DD Form 1801, or MAJCOM-approved form) is not processed through base operations, the flying unit must have a written agreement with the local chief of airfield management, outlining the procedures for handling flight movement messages and identifying the agency responsible for flight following.

3-3. Completing Flight Plans. DD Forms 175 and 1801 must be completed according to the examples and instructions in the FLIP planning documents. When a MAJCOM-approved flight plan form is used as substitute for DD Forms 175 or 1801, complete it as directed by the prescribing authority. In addition:

a. Printing is authorized on the back side of flight plan forms to meet local requirements.

b. List passengers on AF Form 96, Passenger Manifest, according to AFR 76-21 or as directed by the MAJCOM.

c. If the crew or passenger list is not filed with the flight plan, then, in the flight plan remarks, give the location of the crew or passenger list.

d. If there are unscheduled changes in the crew or passenger list either:

(1) Send them to the facility that processed the original manifest or flight plan.

(2) Leave them with a responsible person or agency where the change is made, and notify the nearest Flight Service Station (FSS), or its equivalent, of the name of the person or agency holding the revised list.

3-4. Stopover Flights. A stopover flight is one in which an intermediate stop or stops are planned enroute to a final destination. The following apply:

a. Before departure, plan the entire flight to final destination in the greatest detail possible and complete the proper parts of the AF Form 70 (or the command-approved substitute) for each leg.

b. Before departing each intermediate stop, the pilot must obtain the latest weather and NOTAM information available for the intended route of flight.

*c. As soon as practical after takeoff from any civil airport, the pilot makes sure that an FSS (or its equivalent in an oversea area) is notified of the departure time.

d. Under ICAO rules, intermediate stops are not listed in international flight plans. The authority to make intermediate stops in an oversea area, or in a foreign air defense identification zone (ADIZ), depends on concurrence of the agency that controls the airspace. Therefore, do not show intermediate stops on the DD Form 1801 unless required by a written agreement with the proper air traffic and airspace authorities. Such a written agreement must define the procedures for handling flight movement messages and identify the agencies responsible for flight-following and search and rescue.

3-5. Procedures for Flight Plan Filing, Departure, En Route, and Arrival. These procedures are in FLIP and govern operations of all flight in Air Force aircraft.

3-6. Flight Plan Changes:

a. A change in route or destination that was not shown on the original flight plan is authorized without refiling provided:

(1) The change is filed in flight and does not involve penetration of an ADIZ.

(2) The change is approved by the ARTCC for an IFR flight.

(3) The facility providing flight service is notified of the change. The failure to make sure that an FSS (or its equivalent in an oversea area) is aware of the change may result in erroneous flight following, search and rescue service, or unannounced arrival at the destination base.

✶NOTE: When filing a flight plan in flight, use the format in the FLIP En Route Supplement.

(4) The change complies with applicable national rules in an oversea area.

✶b. If the estimated time of arrival (ETA) at destination changes by 15 minutes or more for jet aircraft or 30 minutes for other aircraft, report the change to flight service. Use the FLIP En Route Supplement reporting format.

3-7. Departing From a Nonmilitary Installation. When departing from a nonmilitary installation, follow the instructions in the FLIP planning documents. If communications are not available:

a. Leave a description of the intended flight plan and a list of passengers and crewmembers with a responsible person at the point of departure, if practical, and inform the FSS of a crew or passenger list location when the flight plan is filed.

b. Fly VFR to the nearest point where a flight plan can be filed by radio with an FSS (or its equivalent), an ARTCC, or military facility.

c. Remain clear of any ADIZ.

d. Request that the flight plan and actual departure time be relayed to the facility providing flight service.

3-8. Closing the Flight Plan. The pilot must ensure that the proper agency is notified of flight termination.

a. At a military installation, the pilot should confirm the closing of the flight plan orally with ground controller or base operations personnel.

✶b. At a nonmilitary installation, the pilot ensures the flight plan is closed with the facility providing flight service through any means of communications available. If necessary, use long-distance telephone service.

Chapter 4

FLIGHT AUTHORIZATION, APPROVAL, OR CLEARANCE AUTHORITY

4-1. Flight Authorization. Air Force aircraft will not be flown by any person unless authorized by the commander who has operational control over the aircraft. When the flight is authorized as prescribed by AFR 60-1, such authorization releases the aircraft to the designated pilot in command. The commander must make sure that the designated pilot in command (or formation flight leader) is qualified and current in the aircraft.

a. The commander must make sure that the flight authorizations are prepared as directed in AFR 60-1.

b. Air Force aircraft are properly authorized for flight regardless of parent service of the pilot in command.

c. The pilot in command of non-Air Force aircraft authorizes use of that aircraft in flight.

d. If the military need is urgent, the commander may authorize the use of transient aircraft by other than the originally designated pilot in command, and may permit aircraft to be flown with less than the minimum crew prescribed by the appropriate flight manual.

4-2. Approval Authority:

a. A flight, properly authorized, must be approved before takeoff. The authority to approve a flight is usually delegated to the individual who assumes responsibility for the aircraft. Unless specifically withheld by the individual's flying unit commander, approval authority may be exercised by:

(1) Pilots who have an instrument rating (or its equivalent) for their own flights and flights of other aircraft in a formation they command. (Army or Navy special and standard instrument ratings and FAA instrument or airline transport rating meet the requirements of this paragraph.)

(2) Pilots who do not possess an instrument rating, for their own flights conducted under VFR.

(3) Air Force flying unit commanders for flights from installations under their operational control by pilots or students pilots who do not have their own approval authority.

b. A signature by the pilot in command on the flight plan is evidence of approval and signifies that:

(1) The flight has been properly ordered and released.

(2) Adequate flight planning data was available for complete and accurate planning.

(3) The flight will be conducted according to governing directives.

(4) The flight plan has been reviewed for completeness and accuracy.

(5) Foreign clearance briefings, when required, met the minimum requirements of the FCG.

*(6) Each member of a formation flight was briefed on all pertinent aspects of the planned flight and the pilot in command of each aircraft in the formation possesses an instrument rating, if any portion of the flight is to be conducted under IFR.

(7) The individual is aware of his or her responsibility for the safety of the aircraft or formation of aircraft and its occupants.

4-3. Approval Authority Limitations:

a. When departing for destinations outside the continental United States (CONUS), all aircraft will proceed through designated foreign clearance bases as identified in FLIP and FCG.

b. When operating from non-Air Force installations, pilots will file and clear according to this regulation and FLIP.

*c. Air Force jets, other than C-designated aircraft, will not file to or land at CONUS civil (P) airports except:

(1) In an emergency.

(2) When necessary in the recovery of active air defense interceptor aircraft.

(3) When an alternate airport is required and no suitable military airport is available.

(4) When the flight is approved by the wing commander or higher authority and the airport manager has granted permission in advance.

(5) When the airport of intended landing is classified in the FLIP supplement as a joint-use field (for example, Air Force, ANG, Navy, etc.) and airport facilities or ground support equipment are appropriate to the needs of the aircraft concerned.

NOTE: For the purpose of this paragraph, an aircraft is considered a C-designated aircraft if its only mission is to transport personnel or cargo.

✱d. Practice instrument approach training may be conducted at civil facilities only with the approval of the local air traffic control facility (tower or approach control). Volume training requires concurrence of the civil airport authorities before use.

e. Do not operate aircraft in designated special use airspace or an ADIZ contrary to the restrictions published for these areas unless the controlling agency has authorized the deviation.
NOTE: Information concerning special use airspace and ADIZs is published in FLIP (updated by NOTAM) and AFR 60-22.

4-4. Approval Authority Exception. Flights to or from other than established landing surfaces (pastures, highways, etc.) by fixed wing aircraft must be approved by the commander having operational control over the aircraft concerned. The decision to approve the flight must be based on a thorough evaluation of all factors involved.

4-5. Clearance Authority. To ensure the safe and orderly flow of air traffic, each flight must be properly cleared for the intended operation.

a. If the flight operates in controlled airspace according to IFR, an ATC clearance must be obtained from air traffic control before departure. In uncontrolled airspace, the pilot is the clearance authority.

✱b. Flights conducted entirely under VFR rely on the "see and avoid" concept. Since pilots are responsible for their own separation from other aircraft, the pilot's signature on the flight plan is sufficient to clear the flight.

c. Helicopter flights conducted under special VFR require a clearance from the local air traffic control agency (tower or approach control).

4-6. Compliance With Air Traffic Control Clearances:

a. Each pilot complies with all instructions issued by an air traffic control agency unless an emergency or safety consideration makes compliance impractical. In such cases, the pilot:

(1) Requests an amended clearance or, lacking sufficient time, notifies the controlling agency in advance of the action contemplated.

(2) If time does not permit, notifies the controlling agency as soon as possible of action taken.

(3) Changes the flight plan.

NOTE: If a deviation from the prescribed clearance requires traffic priority, report the circumstances as explained in paragraph 1-4b.

b. To avoid misidentification of aircraft in a radar environment, no aircraft will knowingly follow the clearance or instructions issued by ATC to the pilot of another aircraft.

4-7. Compliance With International Procedures. The US Air Force FCG is the basic source of information for guidance on national and foreign rights, foreign clearance authority, foreign clearance bases, and procedures for clearing and controlling international air operations. MAJCOMs establish procedures to ensure that aircrews comply with FCG requirements. The procedures must require:

✱a. That appropriate airports of entry or departure are used for aircraft entering from or departing for foreign territory.

NOTE: Entry into the United States should be through regular foreign clearance bases if practicable.

b. That all crewmembers are briefed on customs rules before international flights, especially on the prohibition of drugs and the penalties for smuggling.

c. That preflight and postflight aircraft checks conducted by aircrewmembers are expanded for all flights whose destination country is other than the country of departure. These expanded checks are needed to reduce the possibility that narcotics could be smuggled aboard Air Force aircraft. They must include:

(1) A check of the likely areas aboard the aircraft where drugs may be concealed.

(2) Proper manifesting of all personnel and cargo.

d. That the crewmembers report any suspected customs irregularity immediately to proper authorities.

e. That the pilot in command is responsible for ensuring compliance with the requirements in a through d above.

Chapter 5

GENERAL FLIGHT RULES

5-1. Operational Standards. Pilots must not operate US Air Force aircraft in a careless or reckless manner that endangers life or property.

a. A person must not act or be permitted or required to act as a crewmember of an aircraft:

(1) While under the influence of alcohol or its aftereffects.

(2) While under the influence of or using any drug which affects the crewmember's ability to safely perform assigned duties.

(3) If the individual's physical condition is suspected or known to be detrimental to safety.

b. Do not carry any person who is obviously under the influence of intoxicants or narcotics aboard a US Air Force aircraft except:

(1) In an emergency.

(2) When in patient status under proper care, or when exceptional circumstances exist and no compromise of safety is anticipated.

*c. Crewmembers will occupy their assigned duty stations from takeoff to landing unless absence is normal in the performance of crew duties.

5-2. See and Avoid. When weather conditions permit, regardless of whether an operation is conducted under IFR or VFR, the "see and avoid" concept applies.

5-3. Proximity of Aircraft. Pilots will not fly an aircraft so close to another as to create a collision hazard. Use 500 feet separation (well clear) as an approximate guide except for:

a. Authorized formation flight.

b. Command-approved maneuvers in which each participant is fully aware of the nature of the maneuver and qualified to conduct it safely, for example, interceptor attack training.

NOTE: If an emergency requires visual checks for an aircraft in distress be extremely careful that this action does not increase the overall hazard (see paragraph 1-4a). The decision to operate near another aircraft in flight must be carefully considered. Also, consider the capabilities of the aircraft, with a full understanding of the intentions of the crews involved.

5-4. Formation Flight. For the purpose of this regulation, a formation flight is a grouping of two or more aircraft in which the members are responsible for their own separation from each other. Such a group is treated, for ATC purposes, as a single aircraft. The grouping is not considered a formation unless a single, predesignated person is responsible for group safety, integrity, and navigation. Although flight leader responsibility may change during a formation flight, each change must be governed by established, prebriefed procedures.

NOTE: See FLIP General Planning for definitions of standard and nonstandard formation.

a. Nonstandard Formation Flight. Nonstandard formation flights may be conducted as specified in FLIP GP, Explanation of Terms, or when operating according to VFR.

b. Transponder Operations During Formation Flight. Unless otherwise specified in Allied Communications Publication 160 US Supplement 1 (ACP 160, US Sup 1):

(1) During a standard formation flight, one aircraft (normally the lead) squawks the proper code while all others squawk standby. During a nonstandard formation flight, one aircraft (normally the lead) squawks the proper code unless otherwise directed by the controlling agency.

(2) During refueling, when the receiver formation is within 3 nautical miles of the tanker aircraft, the receiver formation squawks standby, unless the flight manual specifies different distances.

5-5. Right-of-Way Rules. Right-of-way is usually given to the aircraft least able to manuever and normally permits that aircraft to maintain course and speed; however, visibility permitting, each pilot must take whatever action is necessary to avert collison, regardless of who has the right-of-way. When another aircraft has the right-of-way, the yielding aircraft does not pass over, under, abeam, or ahead of the other aircraft unless well clear.

a. Distress. Aircraft in distress have the right-of-way over all other air traffic.

b. Converging. When converging at approximately the same altitude, pilots will yield right-of-way when observing another aircraft of the same category to their right. Aircraft of a different category have the right-of-way in the following order of priority:

(1) Balloons.

(2) Gliders.

(3) Aircraft towing or refueling other aircraft.

(4) Airships.

(5) Rotary or fixed-wing aircraft.

c. Approaching Head-On. If aircraft are approaching each other head-on or approximately so, each alters its course to the right.

d. Overtaking Aircraft. An overtaken aircraft has the right-of-way. The overtaking aircraft alters course to the right.

e. Landing. Once on final approach, an aircraft has the right-of-way over other aircraft on the ground or in the air, except when two or more aircraft are approaching to land. The aircraft at the lower altitude has the right-of-way, provided it does not use this advantage to cut in front of or overtake the other.

***f. Water Operations.** Rules for operating aircraft on or from the surface of water conform to marine rules for operating vessels. Right-of-way rules, as outlined in b, c, and d above, apply equally to water operation without regard to category of craft. If possible, aircraft operating on the surface of the water will keep clear of all vessels and avoid impeding their navigation.

5-6. Communication in Flight:

a. Pilots will establish and maintain two-way radio communications with the proper ATC facility or FSS if possible.

b. Pilots will monitor emergency frequencies at all times.

*c. If radio communications fail in flight, watch the tower for proper light signals when approaching the airport for landing (see the Flight Information Handbook).

5-7. Aircraft Speed:

a. Do not operate at or above Mach 1 except as specified in AFR 55-34. Pilots complete AF Form 121, Sonic Boom Log, for each supersonic sortie according to AFR 55-34.

b. When operating in US sovereign airspace, aircraft will not exceed 250 knots indicated airspeed (KIAS) below 10,000 feet mean sea level (MSL), unless necessary to comply with the minimum safe airspeed specified in the aircraft flight manual. For exceptions, see attachment 2.

c. When operating outside US sovereign airspace, do not exceed 250 KIAS below 10,000 feet MSL unless:

(1) Operations are conducted in international airspace and mission requirements dictate speed over 250 KIAS.

(2) Aircraft speeds over 250 KIAS are permitted by ICAO or host nation rules.

(3) It is necessary to comply with the minimum safe airspeed specified in the aircraft flight manual.

(4) Required by air traffic control.

d. In an airport traffic area, reciprocating aircraft will not exceed 156 KIAS, and turbine-powered aircraft will not exceed 200 KIAS unless authorized by air traffic control or required to maintain the minimum safe maneuvering airspeed specified in the aircraft flight manual.

e. Maintain a speed of 200 KIAS or less in the airspace beneath the lateral limits of any terminal control area (TCA), unless required to maintain the minimum safe maneuvering airspeed specified in the aircraft flight manual.

*f. Holding airspeeds are according to FLIP General Planning (GP) chapter 5.

5-8. Landing Area Rules. Pilots do not operate aircraft in an airport traffic area, except for takeoff and landing, unless specifically authorized or directed by the controlling agency.

***a. Takeoff and Landing.** If the airport has an operating control tower:

(1) A clearance must be received from ATC before taxiing, takeoff, or landing.

(2) The tower normally determines takeoff and landing direction (see AFR 60-5). (When no tower is available, takeoff or landing is made on the runway most nearly aligned into the wind.) When a no-wind condition exists, the pilot may request the runway favored by shorter taxi distances (or other local considerations) and use it if a clearance is received.

NOTE: Requests to use other than the active runway should be based primarily on safety of flight.

(3) Unless specific restrictions are stated, a clearance to taxi to a specific runway means the aircraft may taxi across all other runways and taxiways, but must not taxi across, or onto, the assigned runway.

(4) After landing, do not use a runway to taxi unless specific clearance is received.

NOTE: This does not prevent aircraft rollout to the end of the landing runway.

***b. Turns After Takeoff, Low Approaches, or Closed Patterns.** Do not turn aircraft after takeoff, low approach, or when cleared for closed pattern until past the departure end of the runway and a safe airspeed and altitude have been reached unless:

(1) Safety dictates otherwise.

(2) Specifically authorized by the control tower or required by local procedures to turn prior to departure end of runway.

c. Traffic Patterns:

(1) At Air Force installations, fly the traffic pattern prescribed in AFR 55-48, or as published in FLIP, unless otherwise directed.

(2) At other than Air Force installations, fly traffic patterns as directed by the control tower or as published in FLIP.

(3) At airports that have no control tower, standard light signals or visual indicators prescribe the direction of traffic and landing runway. Departure must comply with the appropriate route for the airports. (See "Visual Indicators at Uncontrolled Airports" in the Airman's Information Manual for detailed description.)

(4) Helicopters must avoid the flow of fixed wing aircraft, however, helicopters that have a compatible airspeed may fly in the rectangular pattern.

d. Helicopter Landing Areas. Helicopters are authorized to operate from other than established landing areas (fields, highways, parks, etc.) provided:

(1) A military requirement exists; authorization to use the area for landing is obtained; safeguards are taken to permit operations without hazard to persons or property; and no legal objections are apparent.

(2) The helicopter is involved in rescue operations.

e. Night Operations. A pilot does not conduct flight operations between the hours of official sunset and official sunrise unless the runway is outlined with lights and is clearly discernible. However, in Alaska and any other area located further than 60 degrees latitude, aircraft may be operated from an unlighted airport during the period of civil twilight, as published in The Air Almanac.

NOTE: MAJCOMs set illumination requirements for helicopter landing areas if they are not established in other directives.

f. Landing Gear Reporting Procedures. Pilots report "gear down" to the ATC agency or runway supervisory unit after the landing gear has been extended.

(1) This report must be made before crossing the runway threshold, and is mandatory for any approach to any airport.

(2) Pilots flying aircraft with fixed landing gear are not required to make a "gear down" report.

5-9. Altitude Requirements. Except for takeoff or landing, pilots do not fly aircraft:

a. Anywhere except at an altitude which permits an emergency landing (if there is an engine failure or other mechanical malfunction) without undue hazard to persons or property on the surface.

b. VFR above 3,000 feet AGL at altitudes or flight levels other than those specified in FLIP, except while turning.

c. Over congested areas (such as a city, town, settlement, or persons), if the altitude does not ensure at least 1,000 feet above the highest obstacle within a 2,000 foot radius of the aircraft.

d. Over noncongested areas at an altitude of less than 500 feet above the surface-except over open water or sparsely populated areas. Under such circumstances do not operate aircraft closer than 500 feet to any person, vessel, vehicle, or structure.

NOTE: Helicopters or aircraft conducting approved aircraft flight tests may operate at lower altitudes than these minimums (see c and d above) if they do not create a hazard to persons or property on the surface. During test, acceptance, or research flights conducted below 1,500 feet AGL, single engine helicopters must remain within autorotation distance of a clear area.

e. In a disaster area designated by NOTAM. Exceptions are permitted when an aircraft is:

(1) Aiding in airborne relief for the area.

(2) Going to or from an airport in the area, but does not hamper or endanger relief activities.

(3) On a flight that has been specifically cleared by ATC.

5-10. Low Altitude Operations. When a fixed-wing aircraft flies point-to-point above 250 KIAS and below 10,000 feet MSL, it must operate as outlined in paragraph 5-7.

5-11. Altimeter Settings. Set altimeters according to FLIP General and Area Planning. Radar altimeters are used according to paragraph 8-14, aircraft technical orders, command directives, or supplements to this regulation.

5-12. Simulated Instrument Flight. When approved by the MAJCOM, simulated instrument flight (defined in AFR 60-1) may be flown and

logged without using vision restricting devices. Observe these safety precautions on each simulated instrument flight:

a. The aircraft must be equipped with a functional two-way radio.

b. A safety observer with a current aeronautical rating (able to see outside at all times) must accompany the flight, either as a crewmember or in a chase aircraft. If a chase aircraft is used, maintain continuous visual contact and two-way communications between aircraft. MAJCOMs set observer qualifications.

★c. The minimum altitudes set by the MAJCOM must provide at least 2,000 feet obstruction clearance when a vision-restriction device is used and the observer:

(1) Is not qualified as first pilot or copilot in the aircraft.

(2) Does not have full view of the flight instruments.

(3) Does not have access to the flight controls.

(4) Is in a chase aircraft.

d. Do not practice takeoffs or landings using vision-restricting devices, unless the MAJCOM approves them for special instrument training.

e. Conduct simulated instrument approaches according to chapter 8.

5-13. Simulated Emergency Flight Procedures. Do not practice emergency procedures when passengers are on board the aircraft. MAJCOM restrictions on such practice must include:

★a. Prohibiting simulated emergency takeoffs and landings at night or in IMC. (MAJCOMs may authorize these operations at night in VFR conditions for aircraft with three or more engines when consistent with sound safety practices.)

b. Procedures for practicing emergency takeoffs and landings when an instructor pilot or flight examiner does not have immediate access to the aircraft controls.

c. Procedures for simulated single-engine failure or no-flap approaches or landing in three-engine (or more) aircraft in daylight instrument meteorological conditions (IMC). The weather conditions, however, must be at or above published circling minimums for the approach being flown.

d. Instructions to minimize actual engine shutdown when a reduction of power suffices.

e. Not allowing the practices of simulated flame-out (SFO) or forced landing (FL) approaches unless:

(1) Aircraft technical orders (TO) furnish specific guidance for performing SFO or FL approaches.

(2) Those approaches conform to TO patterns.

(3) The procedures have been briefed in the preflight briefing.

(4) Jet aircraft SFO or FL approaches are flown at military airports or at P fields where letters of agreement are in effect. Further, the airport must have an active tower or runway supervisory unit (RSU), enough runway for that aircraft, and proper crash and rescue equipment.

(5) The practice approaches are precoordinated with ATC agencies responsible for the airspace the SFO and FL pattern transits.

5-14. Touch-and-Go Landings:

★a. Commanders will ensure that touch-and-go landings are conducted only for essential training, evaluation, or mission accomplishment. These landings are usually limited to aircraft that have two operable sets of controls, with one set manned either by an instructor pilot or a flight examiner. This limitation does not apply to those touch-and-go landings conducted as required by the syllabi of courses in AFR 50-5.

b. MAJCOMs may authorize touch-and-go landings in any command operated aircraft if the mission requires them, but must give explicit guidance in the command supplement about what conditions must be met and what qualifications the pilot must have.

5-15. Parachuting or Dropping Objects. Except in an emergency (or when specifically directed to do so), the pilot in command must not allow any object to be dropped (or any parachute jumps to be performed) from an aircraft. The approving agency must make sure that the drop of a parachutist or object will not create a hazard to person, property, or other air traffic. The aircrew:

a. Makes an authorized parachute drop using the procedures specified in FAR, Part 105.

b. Jettisons fuel, when authorized after notifying the appropriate air traffic control or flight service facility of intentions, altitude, and location, and when the operation has been completed.

c. Drops chaff containing rope elements, when authorized, according to AFRs 55-34 and 55-44.

d. Report any accidental loss of equipment, aircraft parts, or jettisoning of cargo according to AFR 127-4, and JCS Pub 6, volume 5.

5-16. Aircraft Lighting:

*a. Aircraft (except the F-5, T-38, and C-21) must display lighted standard position lights:

(1) Immediately before engine start and when an engine is running. As a rule, position lights are steady when displayed with the anticollision lights; they are flashing at other times.

*NOTE: Aircraft that do not have power available before start are exempt until after engine start and transferred to internal power.

(2) Between the hours of official sunset and official sunrise when parked in an area likely to create a hazard or while being towed, unless clearly illuminated by an outside source.

b. Anticollision or strobe lights are operated from takeoff to landing on all flights, unless reflections cause pilot distractions in instrument flight conditions.

c. Except when detrimental to flight safety, landing or taxi lights are displayed on final approach:

(1) Any time (day or night) when not in direct continuous contact with the tower or RSU.

(2) At all times as recommended by the flight manual or as requested by the appropriate controlling agency.

d. When operating below 10,000 feet MSL, all external lights are illuminated (day or night) within operational constaints.

NOTE: Special use lights, such as aircraft installed ground flood lights, helicopter search spotlights, etc., may be left off at the pilot's discretion.

e. Amphibious craft at anchor display anchor lights, unless located in an area where anchor lights are not required on vessels.

NOTE: To the extent necessary for safety, lighting configuration for formation flights may be varied according to the aircraft type and mission requirement. Guidance not in operational procedures or flight manuals is established by the unit exercising operational control of the aircraft, but must allow other aircraft in flight adequate visual identification of the entire formation.

5-17. Aerobatics and Air Combat Training. Aerobatics and air combat training will be performed only in special use airspace or ATC assigned airspace. Aerobatics refers to intentionally performed spins, vertical recoveries, and other maneuvers that require pitch or bank angles greater than 90 degrees. Air combat training is flight involving basic flight maneuvers, air combat maneuvers, or defense combat maneuvers singularly or in combination.

5-18. Participation in Aerial Reviews. Goodwill flights and weapons demonstrations are governed by AFR 60-18.

5-19. Smoking Rules. Smoking is prohibited:

*a. If directed by the pilot in command.

*b. During any ground or hover operation.

c. Immediately after takeoff and before landing.

d. By crewmembers when oxygen requirement is "O", or when oxygen is required to be immediately available, unless the crewmember is using a quick-don type mask (see table 6-1).

e. In any fuselage section containing fuel.

f. During air-to-air refueling, fuel dumping operations, or when fuel fumes are detected.

5-20. Landing With Hot Armament. When a flight carries live armament stores, local units develop procedures unique to the unit mission to ensure full safety in all ground operations.

a. Before landing with hot armament at an airfield where local procedures are not known, the pilot will:

(1) Advise the tower of the cirumstances.

(2) Request that transient alert and other appropriate agencies be advised.

(3) Request taxi instructions to the designated safing or dearming area.

b. After landing with hot armament at a non-Air Force installation or an airport where taxi instructions are not received or local procedures are not known, the pilot will:

(1) Avoid taxiing into an area or position that could threaten personnel or equipment.

(2) Before leaving the aircraft, be sure that the ground crew is aware of the armament stores on board.

(3) If needed, request assistance from the nearest Air Force facility by the most expeditious means.

NOTE: This paragraph does not relieve the pilot of responsibilities outlined in AFR 55-14.

5-21. Pilot Reports (PIREP) and Air Reports (AIREP):

*a. Pilots are urged to make weather reports of all weather elements whenever possible. Report hazardous weather immediately to the most appropriate agency (ARTCC, FSS, PMSV,

control tower, approach control). PIREP procedures are in the Flight Information Handbook.

b. AIREPs differ from PIREPs in that AIREPs are usually made over areas where weather data are limited or nonexistent (for example, over an ocean). AIREPs also contain supplemental aircraft position information. MAJCOMs provide aircrews guidance on when to file an AIREP. When required, AIREPs are taken and reported according to the instructions on AF Form 72, Air Report (AIREP). The pilot must brief the forecaster at the destination airfield on the weather conditions that prompted AIREPs, and pass on any other significant weather information.

5-22. Operation in the Vicinity of Thunderstorms:

a. Except for a MAJCOM-approved mission that requires planned penetration of thunderstorms, there is no peacetime mission that requires such pentration.

b. Use these procedures for flights near a thunderstorm:

✱(1) Do not take off, land, or fly an approach at an airport if thunderstorms are producing hazardous conditions (such as hail, strong winds, gust fronts, heavy rain, lightning, wind shear, or microbursts).

(2) When observed or reported thunderstorm activity adversely affects the flight plan route, pilots must delay the scheduled mission, alter the route of flight to avoid the thunderstorm activity or proceed to a suitable alternate. Use all available facilities to include radar, PMSV, and PIREPs to avoid thunderstorm activity (see AFM 51-12).

5-23. Wake Turbulence and Wind Shear. Pilots should notify ATC if wake turbulence or wind shear is encountered on any approach. Greater separation may be attained by pilot adjustments or requests made to ATC.

Chapter 6

LIFE SUPPORT SYSTEMS

*6-1. **General Information.** Commanders of flying units ensure that nonrated personnel and civilians who must make regular and frequent flights receive an indoctrination course on emergency procedures and on the proper use of emergency equipment. These courses must address specific equipment and procedures to be used for the type mission and aircraft to be flown.

NOTE: A preflight briefing by an aircraft commander is not an indoctrination course.

6-2. Use of Parachutes:

*a. **Fixed-Wing Aircraft.** If a bailout procedure is developed for a given aircraft, each occupant must be given the type of parachute specified in the relevant Air Force technical order (AFTO). Except during combat or while performing hazardous acceptance or research flights, the MAJCOM may waive the above requirement for:

(1) Transport and tanker aircraft with three or more engines.

(2) Twin-engine transports and utility aircraft which have reliable single engine performance at all stages of the mission profile.

(3) Specific operational or training flights. A MAJCOM-approved waiver must include enough additional guidance to ensure sound flight safety standards.

b. Helicopters. The MAJCOM prescribes the use of parachutes in rotary wing aircraft.

c. Responsibilities of the Aircraft Commanders:

(1) Before takeoff, make sure that the required number of parachutes are available, assigned and fitted to each person aboard the aircraft. During the preflight briefing, each occupant must be told:

(a) Where each emergency exit is located and how to use it.

(b) Where the parachutes and associated equipment are located and how to use them.

(c) The procedure to use in abandoning the aircraft and sending emergency signals. If the aircraft does not have a public address system or is not used in aeromedical evacuation, show the occupants how the alarm system sounds against the background of engine noise.

(2) During flight, ensure that each passenger and crewmember:

(a) Wears an assigned nondetachable-pack type parachute all the time. If it must be removed to perform in-flight duties, it must be kept within reach of the occupant it is assigned to.

(b) Wears an assigned nondetachable-pack type harness at all times (if assigned). The pack must be attached to the harness in an emergency.

(c) If practical, wears a parachute when the aircraft is: performing aerobatics; making a test; flying in a formation; performing gunnery, air refueling, and target towing missions; and performing other similar missions.

(d) When moving or working in or near an open door during flight, wears a parachute or authorized restraint harness.

d. Spare Parachutes. Keep spare parachutes near emergency exits and easily accessible. Spares are required as follows:

(1) If more than four persons are on an aircraft, provide one extra parachute (or 10 percent of the required number, whichever is greater). The maximum number of spares need not exceed 10.

(2) If the aircraft is divided into separate sections (by bomb-bay doors or other structures), each section that has more than four persons must have an extra parachute (or 10 percent of the number required in the section, whichever is greater).

6-3. Seat and Safety Belt Requirements. The pilot in command must make sure that each occupant over 2-years old has an approved seat equipped with a safety belt.

a. Seat belts must be worn:

(1) When an ejection seat is occupied.

(2) By the occupants of pilot and copilot positions.

(3) During each takeoff and landing. The MAJCOM may waive this for selected crew positions when it is impractical to wear the seat belt while performing crew duties.

(4) If directed by the pilot in command.

(5) By at least one helicopter pilot for all operations in which the rotors are engaged.

NOTE: Each passenger and crewmember should wear a seat belt constantly during a flight while seated, to avoid injury in the event of sudden turbulence.

b. If a shoulder harness is installed, it must be worn with the seat belt during each takeoff and landing. (The MAJCOM may waive the requirement for a specific tactical helicopter mission or for a selected crew position when it is impractical to wear the shoulder harness while performing crew duties.)

***6-4. Personal and Survival Equipment.** Except as prescribed in a and b below, the MAJCOM prescribes the minimum essential items of clothing or equipment that the crewmembers and passengers must wear or carry. These items should be adequate to enhance survival in the event of an ejection or unplanned landing. The quantity and nature of equipment carried should be consistent with the type of terrain, environmental condition of the geographic area, number of occupants, availability of flight following service, and anticipated timeliness of search and rescue service.

a. Passenger-Carrying Aircraft. Equip all passenger-carrying aircraft with:

(1) Pyrotechnic signaling devices.

(2) A portable radio that can transmit on an emergency frequency and operate from an independent power source.

(3) First aid kits.

(4) Clothing and equipment to protect against exposure on flights in which flight following or search and rescue service cannot provide timely rescue along the route to be flown.

NOTE: An oversea MAJCOM may prescribe minimum essential items of survival equipment to be carried aboard all aircraft entering its area of responsibility, but must have these requirements published in the proper FLIP, Area Planning section.

b. Overwater Operations:

(1) Aircraft Equipped with Ejection Seats or Modules. Each crewmember in these aircraft must wear a life preserver and carry a life raft on each preplanned overwater flight. Each crewmember must also wear antiexposure suits (preferably a constant wear garment) on any preplanned overwater flight when the water temperature is 60 degrees F (15.5 degrees C) or less. If the water temperature ranges between 60 degrees F (15.5 degrees C) and 51 degrees F (10.5 degrees C), the MAJCOM may waive the antiexposure suit requirement after considering these factors carefully:

(a) Climate zone and existing weather (refer to TO 14P3-5-81) through out range of flight.

(b) Number and type of aircraft participating in sortie.

(c) Time of flight over water.

(d) Distance from land.

(e) Mission altitude.

(f) Risk, based on type of sortie.

(g) Degree of surveillance over mission.

(h) Location, availability, and capability of search and rescue (SAR) forces.

(i) Operational requirements.

NOTE: The MAJCOM option to waive requirements for antiexposure suits is intended primarily for overwater flights of extended duration, such as ocean crossings.

EXCEPTIONS: Crewmembers of module-equipped aircraft are exempt from the life raft and antiexposure suit requirements. Constant wear antiexposure suit requirements do not apply to aircraft with three or more engines.

(2) All Other Aircraft. In addition to the items required in a above, equipment designed for water survival will be carried aboard all aircraft during flights conducted over water when not within gliding distance of land. There must be at least one life preserver per person and sufficient life rafts to accommodate all persons on board.

NOTE: The MAJCOM may waive the life raft requirement in (1) and (2) above if the only overwater portion of the flight is during the departure or approach phase.

c. Protective Helmets. Each crewmember must wear a custom helmet when the aircraft is:

(1) An ejection seat or module-equipped aircraft.

(2) Performing operations that require use of personal parachutes according to paragraph 6-2.

(3) Performing special missions that require helmets, as directed by the MAJCOM.

EXCEPTIONS: MAJCOMs may direct use of noncustom fit protective helmets for helicopter aircrews as an interim measure pending receipt of custom fit helmets, or as a temporary measure for crewmembers on flight orders for short periods of time.

NOTE: When helmets are worn, natural hair (loose and unbound) must not extend below the bottom of the collar; nor should it be so bulky that the helmet will not fit properly. Buns, braids, hairpieces, and similar items prevent proper fit and are not permitted. Also, pins, ornaments, earrings, barrettes, and clips are

prohibited due to foreign object damage potential. Non-USAF crewmembers flying aboard US Air Force aircraft are authorized to wear their respective service approved flying helmet if it is compatible with the aircraft's life support and communication systems.

d. Flying Clothing. Crewmembers must wear fire-retardant outergarments during all aircraft operations unless the USAF Foreign Clearance Guide requirements take precedence or unless HQ USAF/XOORF waives the requirement because of unique operations. Flight gloves are worn during takeoff and landing, and at other times as directed by the MAJCOM. Waivers for flight glove requirements must be approved by HQ USAF/XOORF.

e. Spectacles and Contact Lenses. Crewmembers will use only those spectacles authorized by AFR 167-3 while performing aircrew duties. Use of contact lenses by crewmembers is prohibited unless the member has been specifically evaluated, and the lenses prescribed and issued by the USAF School of Aerospace Medicine and appropriate waiver granted for their use by HQ USAF/SGPA.

NOTE: Aircrewmembers who wear corrective spectacles or contact lenses should carry a spare set of clear flying glasses, in the appropriate case, on their person while performing aircrew duties.

***f. Night Vision Goggles (NVG).** Prior to initial use of NVGs during night training or operational missions, aircrewmembers must be screened by a unit flight surgeon to ensure that their vision will be adequate with NVGs.

***6-5. Pressure Suits.** Each person flying above FL500 must be trained to use and must wear a pressure suit. The MAJCOM may waive this requirement if necessary and if the command surgeon concurs. When a waiver is granted, the MAJCOM must designate specific time or altitude limits and set up recovery procedures to ensure flight safety.

6-6. Oxygen Requirements. When the cabin altitude exceeds 10,000 feet, each occupant of an Air Force aircraft must use supplemental oxygen.

*NOTE: Due to possible clogging of the inhalation and exhalation valve, facial medications and facial makeup should not be used in conjunction with supplemental oxygen and oxygen equipment.

a. Unpressurized Aircraft:

(1) If the minimum en route altitude or an ATC clearance requires flight above 10,000 feet MSL in an unpressurized aircraft, the pilot at the controls must use oxygen.

(2) If oxygen is not available to other occupants, flight between 10 and 13,000 feet MSL must not be longer than 3 hours, and flight above 13,000 feet MSL is not authorized.

(3) If all occupants are equipped with oxygen, flights may be conducted up to FL 250.

b. Pressurized Aircraft. When an aircraft is flown over 10,000 feet MSL, but its cabin altitude is maintained at 10,000 feet or less, oxygen equipment is used as specified in table 6-1.

(1) A MAJCOM may establish more restrictive procedures for using oxygen during ground or flight operations of tactical aircraft or jet trainers if required.

*(2) Sufficient oxygen must be aboard an aircraft before its takeoff to fly the planned mission.

***c. Loss of Cabin Pressure:**

(1) If the aircraft loses cabin pressure, the aircraft commander will initiate an immediate descent to the lowest practical altitude, but in no case will cabin altitude be maintained above FL 250, unless the occupants are wearing functional pressure suits.

(2) If the aircraft loses pressure, and any occupant lacks functional oxygen equipment, descend to maintain a cabin altitude of 10,000 feet or less and comply with a above.

(3) The aircraft commander will notify the flight safety office of any unintentional loss of cabin pressurization when cabin altitude exceeds 18,000 feet MSL.

NOTE: If in any case an occupant appears to be suffering decompression sickness, the individual should be administered 100 percent oxygen. The pilot will descend as soon as practical, and land at the nearest suitable installation where medical assistance can be obtained. Before the person affected may continue the flight, the individual must have a consultation with a flight surgeon or a civilian aeromedical examiner. Decompression sickness may occur up to 12 hours after mission completion.

Table 6-1. Oxygen Requirement for Pressurized Aircraft.

Ambient Altitude in Feet	Pilot	Pilot*	Occupants
10,000 ft through FL 250	R	R	NA
Above FL 250 through FL 350	I	R	R
Above FL 350 through FL 410	I	I	R
or	O	R	R
Above FL 410 through FL 450	O	I	R
Above FL 450 through FL 500	O	I	I
Above FL 500	P	P	P

Legend:
R—Oxygen must be readily available. A functioning system and mask must be located within arm's reach, and the regulator set to 100 percent and ON, if the system contains an operator adjustable regulator.
I—Oxygen must be immediately available. Helmets must be worn with an oxygen mask attached to one side, or an approved quick-donning or sweep-on mask properly adjusted and positioned for immediate use. Set oxygen regulator to 100 percent and ON.
O—Oxygen must be used.
P—Pressure suit must be worn.

*These requirements also apply to nonpilot crewmember occupying crew positions with direct access to flight controls.

Chapter 7

VISUAL FLIGHT RULES (VFR)

✱ **7-1. General Information.** Fixed wing aircraft will fly under VFR only when VFR operation is necessary to complete that specific mission. If the mission requires VFR operation, remember that the weather criteria for VFR are MINIMUMS. In fact, the pilot should allow a greater margin of safety than these minimums (especially in a terminal area or when poor visibility makes VFR flight questionable). If the weather prevents continued flight under VFR:

a. Alter the route of flight so as to continue VFR.

b. Remain VFR until a change to IFR can be filed and clearance obtain.

c. Remain VFR and land.

7-2. VFR Flight Plan Filing. Flights may be filed according to VFR if:

a. Forecast weather permits flight according to table 7-1.

b. Destination weather or point of changeover on a composite flight plan (a flight conducted according to both VFR and IFR) is forecast to have a ceiling equal to, or greater than, 1500 feet and a visibility of at least 3 miles from 1 hour before until 1 hour after ETA.

EXCEPTION: Helicopter flights may be filed to destinations forecast to have less than the conditions in b above, so long as there is enough useable fuel aboard to permit compliance with paragraph 7-1b and c.

7-3. Flight Operations Under VFR:

a. Flights may be conducted according to VFR if the flight visibility and separation from clouds are equal to or greater than, the requirements in table 7-1.

b. Flights may not be conducted VFR within a control zone unless:

(1) The ceiling is equal to or greater than 1500 feet.

(2) For takeoff and landing the reported ground visibility is at least 3 miles; or if ground visibility is not reported, flight visibility during takeoff and landing is at least 3 miles.

✱ EXCEPTION: Helicopters may be operated VFR within a control zone when the ceiling is at or above 1000 feet and visibility is three miles or more. Helicopters may request a special VFR if the above weather minimums cannot be met provided an ATC clearance is obtained and the flight is conducted clear of clouds at a speed that allows adequate opportunity to see and avoid air traffic or obstructions.

c. Helicopters may be operated under VFR within federal airways up to an altitude at least 500 feet below the minimum enroute altitude (MEA) or the minimum obstruction clearance altitude (MOCA), whichever is lower.

Table 7-1. VFR Cloud Clearance and Visibility Minimums.

	Altitude	Visibility	Cloud
A.	At or above 10,000 ft MSL	5 miles	1,000 ft below 1,000 ft above 1 mile horizontal
B.	Below 10,000 ft MSL	3 miles	500 ft below 1,000 ft above 2,000 ft horizontal
C.	Helicopters Only		

Helicopters operating at 1,200 feet or less above the ground outside controlled airspace (regardless of MSL altitude) must remain clear of clouds. They must be flown slowly enough to allow time to avoid collision with any air traffic or obstructions. Helicopters operating at the base altitude of a transition area or control area are considered to be within airspace directly below that area.

Chapter 8

INSTRUMENT FLIGHT RULES (IFR)

8-1. General Information. All Air Force flights are conducted under IFR to the maximum extent possible without unacceptable mission derogation. Pilots operating in visual conditions according to IFR should be aware that they are in a "see and avoid" environment. Separation is provided only from other IFR aircraft operating within controlled airspace.

8-2. IFR Requirements. Observe the rules of this chapter if:

a. Weather conditions do not permit flight according to VFR.

b. Operating in positive control airspace as depicted in FLIP.

c. Operating within Federal airways.
EXCEPTION: See paragraph 7-3c.
NOTE: Crossing airways is not considered within airways. Where it is necessary to conduct volume training along or through airways, make prior arrangements with the appropriate ATC agency.

d. Performing instrument approaches in a fixed-wing aircraft.
NOTE: Helicopters conduct instrument approaches according to IFR insofar as practical. If volume VFR instrument approach training for helicopters is required, coordinate the procedures with the local ATC facility.

e. Operating on point-to-point flights in fixed-wing aircraft whose primary purpose is training, logistic, or administrative support.
NOTE: If the destination has no terminal instrument approach capability, a composite IFR-VFR flight plan may be filed.

f. Operating between the hours of official sunset and official sunrise unless that specific mission cannot be accomplished according to IFR. Helicopters comply insofar as practical.

8-3. ATC Clearance. Each flight conducted according to IFR is filed according to the flight plan requirements in this regulation and FLIP. Obtain an ATC clearance before making any flight according to IFR that originates in or penetrates controlled airspace.

8-4. Destination Requirements for Filing Purposes. Flights conducted according to IFR are governed by the following criteria:

✱ **a. Published Approach.** The destination must be served by an operational facility for which an instrument approach is published and capable of being flown with navigational equipment aboard the aircraft. A copy of the appropriate FLIP En Route Supplement, enroute charts, Flight Information Handbook, and the appropriate approach procedures will be aboard each aircraft. A published approach is:

(1) Any procedure published in the FLIP (Terminal).
EXCEPTION: If the only means available for defining any fix essential to the execution of the approach is by a radar, comply with (3) below.

(2) A procedure not published in the FLIP (Terminal) but for which an operational requirement exists and use of the procedure is approved by the MAJCOM having jurisdiction over the aircraft.

(3) Any radar procedures for which surveillance radar or precision radar (ASR or PAR) minimums are published in FLIP, provided a positive aircraft position can be established within 25 miles of the terminal by using a nonradar facility. Aircraft operating in positive control airspace (PCA) may file to the nearest nonradar facility or fix, regardless of distance from the terminal, and request radar vector service to the terminal.

b. No Published Approach. Filing IFR to a point en route where VFR conditions are forecast to exist at the time of arrival, or to a point served by a published approach procedure from which a decent to VFR conditions can be made, thence VFR to the destination, is permitted.

c. Weather:

✱ (1) Fixed-Wing Aircraft. (See figure 8-1). Weather for the ETA (+ or − 1 hour) at destination or recovery base must be at or above the lowest minimum published for an approach suitable for the aircraft concerned. If a straight-in approach is planned, only the published visibility requirements for that approach need be met; if a circling approach is planned, both the ceiling and visibility requirements must be met. (MAJCOMs may waive this when operational necessity dictates the use of a destination forecast to be below minimums if an alternate recovery procedure is established; such as, the use of two or more alternate airports, additional

holding fuel, etc.)

(2) Helicopters. Comply with (1) above, with these exceptions:

(a) Helicopter pilots planning a fixed-wing approach procedure may use one-half of the published visibility minimums for the category being flown, but in no case may the minimums be reduced to less than one-quarter mile.

(b) The visibility minimums for "copter only" approaches are used as published (see figure 8-2).

NOTE: Forecasts for intermittent changes in ceilings and visibilities are not restrictive for destination filing purposes, but they may require that an alternate be filed (see paragraphs 8-5 and 8-6).

8-5. When To Designate an Alternate Airport. Designate an alternate airport on all IFR flight plans, regardless of weather, when filing to a destination where radar is required to fly the planned approach (see paragraph 8-4a(1)). Also designate an alternate airport when flight planning if the following conditions exist:

a. For Fixed-Wing Aircraft. During the period 1 hour before until 1 hour after the ETA for the first point of intended landing (for each point of intended landing on a stopover flight plan), the worst weather (intermittent or prevailing) is forecast to be less than:

(1) Ceiling—3,000 feet.

(2) Visibility—3 miles, or 2 miles more than the lowest compatible published landing minimum visibility, whichever is greater (see figure 8-1).

b. For Helicopters. During the period from 1 hour before until 1 hour after the ETA, the worst weather (intermittent or prevailing) is forecast to be less than a ceiling 700 feet or a visibility less than 1 mile (see figure 8-2).

EXCEPTION: When it is necessary to use a remote or island destination for which an alternate airport cannot be designated, the MAJCOM may authorize holding for a specified time period. In that case, the MAJCOM must set up weather criteria and recovery procedures to ensure flight safety.

8-6. Alternate Airport Weather Requirements for Filing Purposes. For an airport to qualify as an alternate, the worst forecast weather (intermittent or prevailing) for the ETA (+ or − 1 hour) must be at or above the following:

a. With a Published Approach Procedure:

(1) Fixed-Wing Aircraft. A ceiling of at least 1,000 feet, or 500 feet above the lowest compatible published landing minimum, whichever is higher, and a visibility of 2 miles, or 1 mile above the lowest compatable published landing minimum, whichever is higher (see figure 8—1).

(2) Helicopters. A ceiling of at least 700 feet, or 500 feet above the lowest compatible published landing minimum, whichever is higher, and a visibility of 1 mile, or one-half mile above the lowest compatible published landing minimum, whichever is higher (see figure 8-2).

b. Without a Published Approach Procedure. Forecast weather for the ETA (+ or − 1 hour) must permit a VFR descent from the IFR minimum enroute altitude and a VFR approach and landing (see figure 8-1).

NOTE: An airport may be named as an alternate even though its forecast predicts intermittent weather conditions due to thunderstorms or rainshowers which are lower than those set forth in a and b above, but the pilot must be thoroughly briefed on the possibility of such weather. In all cases, the forecast for the prevailing weather conditions must meet or exceed the requirements in a and b above. (See paragraph 5-22 for cautions on operations in the vicinity of thunderstorms.)

8-7. Directed Use of an Alternate Airport:

a. Flying unit commanders are authorized to direct their aircraft to proceed to an alternate airport if circumstances warrant.

b. Base commanders are authorized to suggest that an aircraft proceed to an alternate airport if hazardous weather conditions warrant.

NOTE: When these actions are contemplated, commanders should consider pilot preference for holding instead of proceeding to an alternate and be prepared to provide information to assist the pilot.

8-8. Takeoff Minimums. Takeoffs are not permitted unless the existing weather is at or above the minimum prescribed by the MAJCOM to which the pilot is assigned or attached for flying.

a. In the absence of command-established takeoff minimums, no takeoffs are permitted when existing weather is below landing minimums for the specific aircraft.

b. Commands which permit takeoffs when existing weather is lower than the published

landing minimums for the base of departure must develop substitute recovery procedures.

c. When command-established minimums are lower than in a above, all takeoffs will be radar monitored if such services are available.

NOTE: Takeoff minimums for civil contract carriers operating from airports under Air Force jurisdiction are those approved by FAA and published in that air carrier's operations specifications.

d. When instrument departure procedures or Standard Instrument Departures are published, they may include both takeoff minimums and climb gradients for the specific departure. The takeoff minimums specified for these procedures do not apply to US Air Force aircrews. US Air Force aircraft must be capable of achieving or exceeding the published climb gradient to ensure adequate obstacle clearance during departure.

★**8-9. Minimum Altitudes.** Published MEA or MOCA govern IFR operations on airways or advisory routes. MEA or MOCA is designated only for published routes. On direct flights outside the United States (50 States), or where a MEA or MOCA is not published, aircraft will be flown at least 1,000 feet (2,000 feet in mountainous terrain as depicted in FLIP AP 1, 2, or 3) above the highest obstacle within 10NM within controlled airspace, 22NM in uncontrolled airspace either side of the planned route centerline. Within the United States (50 States) these distances may be reduced to 5NM.

NOTES:

. In areas outside the United States (50 states) nd Canada, theatre commanders will designate nountainous areas not otherwise defined by the oreign nation and ensure that terrain so desigated is published in the appropriate FLIP. Mountainous areas include all terrain at or above 000 feet MSL. Charts published in FLIP must inlude a notation of this criteria.

. Minimum altitudes for IFR operations within ublished Military Training Routes in US sovreign airspace are in FLIP AP/1B.

. When flight operations are conducted at the MOCA in FAA controlled airspace, the usable ange of the navigation aid may extend to only 22 autical miles.

-10. IFR Cruising Altitudes:

a. Altitudes requested for IFR flights in conolled airspace are filed according to the cruising ltitude diagram depicted in FLIP but are flown according to altitudes assigned by ATC.

b. In uncontrolled airspace, except when turning or holding in a pattern of 2-minute kegs or less, aircraft will maintain appropriate IFR altitudes as depicted in FLIP.

NOTE: In uncontrolled airspace, the pilot is solely responsible for traffic separation and obstruction clearance.

8-11. IFR En Route Navigation. Unless authorized by the controlling agency, aircraft operating in controlled airspace under IFR on all routes, published or unpublished, will fly along a direct course between navigational aids or fixes defining the route.

NOTE: This paragraph does not apply to operations in special use airspace or on military training routes.

8-12. Communications:

a. Position Reports. A pilot operating under IFR continuously monitors appropriate ATC frequencies. Follow FLIP instructions on position reports, lost communications, and radio procedures.

b. Navigation and Communication Equipment Malfunctions. When operating in controlled airspace under IFR, the pilot in command must immediately report to the ATC facility any malfunction of navigational or air to ground communications equipment, according to FLIP instructions.

8-13. Cancellation or Change of IFR Clearance:

a. Except as otherwise restricted in this regulation, an IFR clearance may be cancelled if existing and forecast weather and NOTAM information will permit safe continuation of the flight under VFR. After IFR has been cancelled, flight service must be notified to ensure that there is flight-following for the VFR portion of the flight unless direct radio contact is established with the destination tower. See the FLIP En Route Supplement for change of Flight Plan format.

b. If the ETA at destination changes by 15 minutes for jet aircraft or 30 minutes for non-jet aircraft, report it to flight service. See the FLIP En Route Supplement for reporting format.

8-14. Approach and Landing Minimums:

a. A published straight-in approach or en route descent to such an approach may be started only if existing weather is reported at, or above, the visibility minimums published for the

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approach to be flown. If a circling approach is to be flown, the reported weather must be at, or above, both the published ceiling and visibility minimums. Helicopters flying a fixed wing approach may use one-half the published visibility minimums for the category being flown, but in no case may it be reduced to less than 1,200 feet runway visual range (RVR) or one-quarter mile.

b. If the published approach or enroute descent is started before the pilot determines or observes that the weather is below published visibility minimums (visibility or ceiling for circling approaches), the pilot does not deviate from the last ATC clearance until a new or amended clearance is obtained. The pilot may elect to:

*(1) Request clearance to a holding fix or alternate airport as applicable.

(2) When authorized by the MAJCOM, continue the approach as published to the missed approach point.

c. The pilot determines minimum approach altitudes (decision height (DH) or minimum descent altitude (MDA)) from the barometric altimeter, except where radar altitudes (RA) are depicted on Category II instrument landing system (ILS) approach procedures.

(1) If RA is depicted for a Category II ILS approach, the radar altimeter is used to determine minimum approach altitude and the barometric altimeter is used as a supporting instrument.

(2) For all other approaches, radar altimeters are used as directed by MAJCOM supplements for aircraft within their command.

NOTE: Only certified aircrews and aircraft may fly Category II ILS approaches.

d. No person may operate an aircraft below the prescribed minimum descent altitude or continue an approach below the decision height unless:

(1) The aircraft is in a position from which a normal approach to the runway of intended landing can be made, and

(2) The approach threshold of the runway, or approach lights, or other markings identifiable with the approach end of that runway are clearly visible to the pilot.

e. If, upon arrival at the missed approach point or decision height, or at any time thereafter, any of the requirements in d above are not met, the pilot immediately executes the appropriate missed approach procedure.

8-15. Determination of Visibility Minimums. Use prevailing visibility (PV) for circling approaches. Use RVR, runway visibility (RVV), or PV, in that order, to determine if the visibility is at, or above, that required for the published approach to be flown.

8-16. IFR "VFR on Top". MAJCOMs may authorize IFR "VFR on Top" operations if a specific mission requires such clearances.

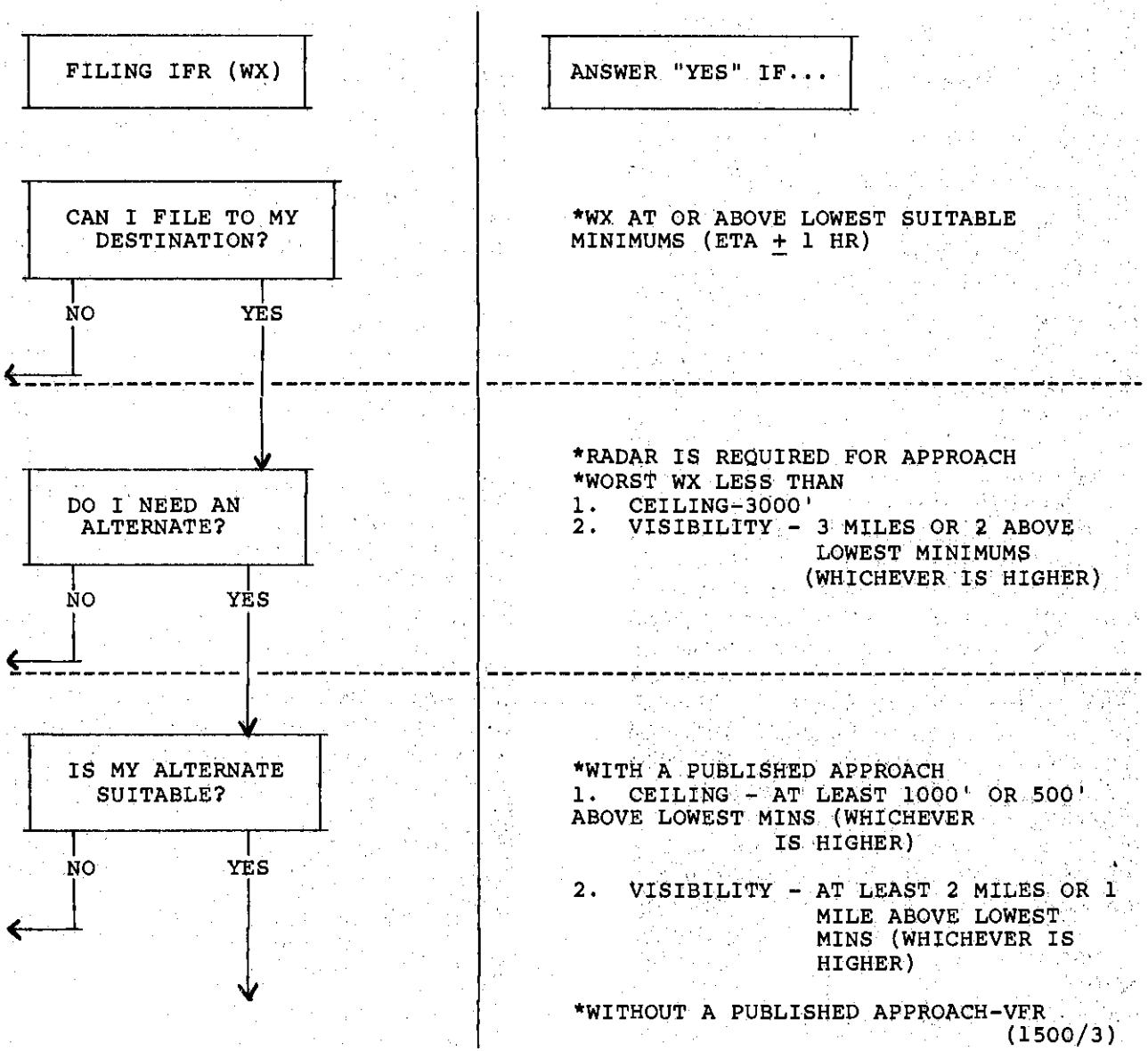

Figure 8-1. Fixed Wing.

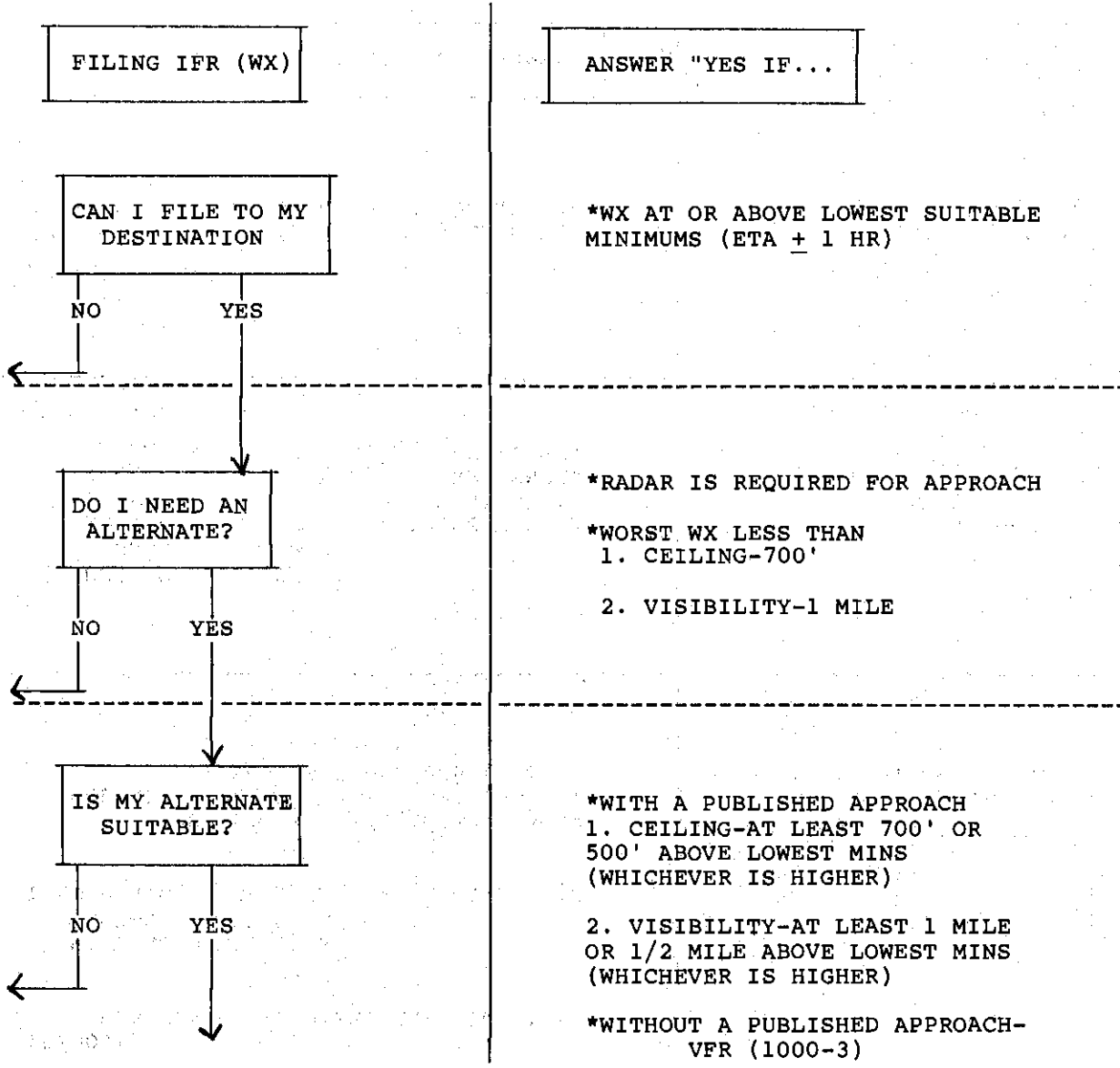

Figure 8-2. Helicopter.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

CHARLES A. GABRIEL, General, USAF
Chief of Staff

NORMAND G. LEZY, Colonel, USAF
Director of Administration

SUMMARY OF CHANGES

This revision clarifies what organizations receive copies of command supplements (para 1-2c); clarifies where waiver requests are sent (para 1-4b); clarifies who gets copies of MAJCOM approved recommendations (para 1-8b); clarifies use of computer generated flight plans (para 2-3); clarifies who in a formation flight is required to have an instrument rating (para 4-2b(6)); clarifies rules for water operations (para 5-5f); clarifies rules on holding airspeeds (para 5-7f); expands discussion on turns after takeoff to include low approaches and closed patterns (para 5-8b); expands simulated emergency flight procedures to include three engine aircraft (para 5-13a), exempts C-21 from using position lights during daylight hours (para 5-16a); clarifies requirement for position lights prior to start for aircraft with no power available until on internal power (para 5-16a(1) note); expands list of hazards associated with thunderstorms to include microbursts (para 5-22b(1)); expands MAJCOM waiver authority for parachutes to include three engine aircraft (para 6-2a(1)); clarifies MAJCOMs option to waive antiexposure suit requirements (para 6-4b(1)); exempts three engine aircraft from antiexposure suit requirements (para 6-4b(1)) exceptions; clarifies use of protective helmets (para 6-4c); clarifies use of fire retardant flying clothing (para 6-4d,) requires aircrewmembers who wear corrective spectacles or contact lenses to carry an extra set of glasses (para 6-4e); clarifies use of facial medications and facial makeup with oxygen equipment (para 6-6 note); clarifies aircraft commander responsibilities in case of loss of cabin pressure (para 6-6c); includes Flight Information Handbook in list of publications required to be carried aboard an aircraft for flight under IFR (para 8-4a); extends distance to be considered when choosing a minimum altitude on a direct flight or on airways where no MEA or MOCA is published from 5NM to 10NM in controlled airspace and 22NM in uncontrolled airspace (para 8-9); instructs theatre commanders to designate mountainous areas not otherwise defined by foreign nations and ensure these areas are published FLIP (para 8-9 note); clarifies IFR En Route Navigation discussion (para 8-11); adds figures summarizing IFR planning rules (figs 8-1 and 8-2); and deletes MAJCOM waiver authority for life rafts.

Related Publications

AFR 50-5, USAF Formal Schools Catalog (Policy, Responsibilities, General Procedures, and Course Announcements)
AFP 51-3, Electronic Warfare Principles
AFM 51-12, Weather for Aircrews
AFM 51-37, Instrument Flying
AFM 51-40, Air Navigation
AFR 55-2, Airspace Management
AFM 55-9, US Standard for Terminal Instrument Procedures (TERPS)
AFR 55-13, Unmanned Free Balloons, Moored Balloons and Kites, Unmanned Rockets, and Derelict Airborne Objects
AFR 55-14, Operational Procedures for Aircraft Carrying Dangerous Materials
AFR 55-16, The US Military Notice to Airmen (NOTAM) System
AFR 55-27, Air Force Life Support Systems Program
AFR 55-34, Reducing Flight Disturbances
AFR 55-44, Performing Electronic Countermeasures in the United States and Canada
AFR 55-48, Airfield Management and Base Operations
AFM 55-354, Sonic Boom Reporting System: A049/FF, Users Manual
AFR 60-1, Flight Management
AFR 60-5, Air Traffic Control Management
AFR 60-9, Flight Manuals Program
AFR 60-11, Aircraft Operation and Movement on the Ground or Water
AFR 60-14, Preventing and Resisting Air Piracy (Hijacking)
AFR 60-15, Aircraft Cockpit and Formation Flight Signals
AFR 60-18, Air Force Participation in Aerial Events
AFR 60-22, Identification and Security Control of Military Aircraft
AFR 60-24, Security Control of Air Traffic and Air Navigational Aids (SCATANA)
AFR 60-27, Flying Instrument Procedures
AFM 64-2, National Search and Rescue Manual
AFM 64-5, Survival
AFP 64-15, Survival and Emergency Uses of the Parachute
AFR 67-24, Emergency Procurement of Ground Fuels, Oil, and Other Supplies and Services at Non-DOD Locations.
AFR 71-4, Preparation of Hazardous Materials for Military Air Shipment
AFR 120-3, Administrative Inquiries and Investigations
AFR 120-4, Procedural Guide for Administrative Inquiries and Investigations
AFR 127-2, The USAF Mishap Prevention Program
AFR 127-3, Hazardous Air Traffic Report (HATR) Program
AFR 127-4, Investigating and Reporting US Air Force Mishaps
AFR 160-43, Medical Examination and Medical Standards
AFR 167-3, Medical Services Ophthalmic Services
FAA Handbook 7110.65, Air Traffic Control
FAA Handbook 7610.4, Special Military Operations
FAA Handbook 8260.19, Flight Procedures and Airspace
FAR Part 91, General Operating and Flight Rules
TO 00-20-1, Preventive Maintenance Program, General Requirements and Procedures
TO 00-20-5, Aircraft, Aircrew Training Devices, Drone, and Air Launched Missle Inspections, Flight Reports and Supporting Maintenance Documents (AFTO 781 Series),
TO 00-25-172, Ground Service of Aircraft and Positioning of Equipment
TO 1-1B-40, Weight and Balance Data
TO 1-1B-50, Weight and Balance
TO 1-1-300, Acceptance/Functional Check Flight and Maintenance Operational Checks

USAF AIRCRAFT SPEED AUTHORIZATIONS

The Federal Aviation Administration has authorized exceptions to the speed restrictions specified in paragraph 5-7b. These exceptions apply to USAF aircraft operations in US sovereign airspace. The provisions of FAA exemptions permit US Air Force aircraft (including ANG and AFRES) to operate at speeds above 250 KIAS below 10,000 feet MSL under the following conditions:

a. Within restricted areas.

b. Within military operations areas (MOA).

c. When operating within large scale exercises or on short-term special missions. These are approved by the MAJCOM on an individual basis. Information on approved activities must be made available to the nonparticipating flying public. Coordinate these operations with:

(1) Affected nonparticipating military flying units.

(2) Affected FAA Air Route Traffic Control Centers (ARTCC).

(3) Affected FAA Regions through the Air Force Representative (AFREP)

(4) Other agencies, as appropriate.

NOTE: Large scale exercises should be conducted in permanent or temporary special use airspace established in according to with FAA Handbook 7610.4 and 7400.2.

d. Within published IFR low level routes.

e. Within published VFR low level routes.

f. Within defined areas or routes which have been coordinated and concurred in by the proper MAJCOM and FAA regions, but have not yet been published. Operations in noncompliance with paragraph 5-7b within these areas or routes are approved by MAJCOMs to accommodate operations on an interim basis to accomplish the MAJCOM mission pending publication of the area or route.

g. When the aircraft flight manual dictates a higher speed or specifies a range, then the aircraft will be operated at the minimum speed in that range.

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