BY ORDER OF THE COMMANDER AIR FORCE SPECIAL OPERATIONS COMMAND

AIR FORCE SPECIAL OPERATIONS COMMAND MANUAL 11-219, VOLUME 3

05 FEBRUARY 2020

Flying Operations

COMBAT AVIATION ADVISOR OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-Publishing website at **www.e-Publishing.af.mil**.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: HQ AFSOC/A3V

Certified by: HQ AFSOC/A3V
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Supersedes: AFSOCI11-219V3, 21 October 2013

Pages: 60

This instruction implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, Air Force Instruction (AFI) 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, and AFI 11-202V3, *General Flight Rules*. It establishes procedures for Combat Aviation Advisor (CAA) aircrew and support aircrew operations in non-advisory operations. This manual applies to all CAA aircrew members, supervisor and instructor personnel who are operating Non-USAF inventory aircraft in support of CAA aircrew members. CAA advisor operations follow the Air Force Special Operations Command Manual (AFSOCMAN) 16-101 series. It provides policies and procedures for most circumstances, but should not replace sound judgment. This instruction applies to Air Force Reserve Command (AFRC) units. This publication does not apply to the Air National Guard (ANG). This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by 37 USC 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974) and 93-294 (Aviation Career Incentive Act of 1974), Department of Defense Directive (DODD) 7730.57 (Aviation Career Incentive Act of 1974 and Required Annual Report, February 5, 1976, with Changes 1 and 2), and Executive Order 9397 as amended by Executive Order 13478. The applicable SORN, F011 AF XO A, Aviation Resource Management Systems (ARMS), is available at: **https://dpclo.defense.gov/privacy/SORNs/SORNS.html**. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form

847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. This regulation may be supplemented by subordinate units. Units will send supplements to the OPR listed above. Unless prescribed within this publication, requests for waivers must be submitted through chain of command to the OPR listed above for consideration and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. Major changes include: the removal of Additional and Supplemental Aircraft and replacement with Non-USAF Inventory Qualification Required (NIQ) and Non-USAF Inventory Certification Required (NIC). Paragraph **4.2**, Operating Guidelines now includes information regarding MELs and minimum operating equipment for aircraft not in the USAF inventory. Paragraph **6.8** authorizes single pilot operations in the case of aircraft that do not have a SIC position. **Chapter 8** includes new guidance for flares, lasers and IR pointers. **Chapter 11**, Adaptive Mobility, replaces the previous **Chapter 9** guidance and is more applicable to multiple airframes. **Chapter 12** and **Chapter 13**, Adaptive ISR and Adaptive Precision Strike.

Chapter 1

GENERAL INFORMATION

1.1. Overview. This instruction and its Addenda are the 11-2MDSV3 for CAA flying operations. Use this instruction and the applicable aircraft specific addenda in conjunction with Aircraft Flight Manual (AFM) or equivalent flight manual, FLIP, and applicable USAF directives. HQ AFSOC/A3V has overall responsibility for administration of this instruction.

1.1.1. When this document references itself, it also refers to the aircraft specific Addendum unless otherwise stated. If this instruction and an Addendum contradict, the Addendum takes precedence for that particular aircraft since it is specific guidance for a specific aircraft; however, the contradiction needs to be stated in the Addendum.

1.1.2. If this instruction conflicts with the CAA advising regulation, the aviator's SQ/CC will decide which takes precedence **(T-3)**.

1.1.3. IAW AFGM, AFIs are to be written as AFMANs. As such, AFSOCI 11-219 is being designated as AFSOCMAN. Addenda will change to AFSOCMAN.

1.2. AFSOCMAN 11-219 and AFSOCMAN 16-101 Relationship.

1.2.1. The AFSOCMAN 16-101 series provides guidance for CAA training and advisor operations. Though it does have organize, train, and equip functions within, the 16-101 series is predominantly an employment regulation.

1.2.2. The AFSOCMAN 11-219 series provides guidance for CAA aircrew and support aircrew training, Standards and Evaluations (Stan/Eval), and flying procedures. This publication also applies to supervisor and instructor personnel supervising or training CAA aircrew members in Non USAF inventory aircraft. The AFSOCMAN 11-219 series provides a way for CAA aircrew to be qualified or certified, as needed, on any aircraft prior to deploying and provides a way for CAA aircrew to practice their mission skillset. As such, the 11-219 series and addenda are organize, train, and equip regulations.

1.3. Applicability. This instruction applies to all CAA aircrew and CAA support aircrew. CAA support aircrew provide aviation expertise without CAA qualification, such as commanders and schoolhouse instructors.

1.4. Terms Explained.

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

1.4.2. "Should," indicates a recommended procedure that is required if practical.

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

1.4.4. **Warning:** Operating procedures, techniques, and so forth, which may result in personal injury or loss of life if not carefully followed.

1.4.5. **Caution:** Operating procedures, techniques, and so forth, which may result in damage to equipment if not carefully followed.

1.4.6. **Note:** Operating procedures, techniques, and so forth, which are essential to emphasize.

1.4.7. Non-USAF inventory (qualification required) (NIQ) aircraft. NIQ aircraft are those which are not part of the enduring USAF inventory but flown for the purposes of CAA aircrew qualification and certification. These aircraft are typically referred to by their civilian designation.

1.4.8. Non-USAF inventory (certification required) (NIC) aircraft. NIC aircraft are those which are not typically owned or leased by the USAF and typically used for less than 6 months for the purpose of aviation irregular warfare, and are certifications for CAA aircrew.

1.4.9. Pilot-in-Command (PIC): A pilot designated as the PIC holds the "A" code on the flight authorizations and is responsible as such. Since CAAs tend to fly civilian aircraft, this instruction tends to use PIC instead of aircraft commander; however, the two are synonymous in this instruction.

1.5. Deviations and Waivers. Do not deviate from the policies and guidance in this instruction, unless safety dictates otherwise.

1.5.1. Although this publication provides guidance for aircraft operations under most circumstances, it is not a substitute for sound judgment. When it is necessary to protect the crew and aircraft from a situation not covered by this instruction and immediate action is required, the PIC has ultimate authority and responsibility for the course of action to be taken. Report deviations through channels to HQ AFSOC/A3 within 48 hours, followed by a written report, if requested.

1.5.2. Unless otherwise indicated, the MAJCOM/A3 is the waiver authority for this instruction. For operationally assigned forces, the waiver authority is the COMAFSOF. Request waivers through command and control channels **(T-2)**.

1.5.3. Tier requirements refer to waiver authority based on level of risk.

1.5.3.1. "Tier 0" **(T-0)** requirements are reserved for requirements that non-compliance is determined and waived by respective non-Air Force authority.

1.5.3.2. "Tier 1" **(T-2)** is for departmental publications only. Non-compliance may put airman, mission, or program strongly at risk. Conformity is needed across the Air Force, and HAF must be consulted prior to deviations. Waiver authority is the MAJCOM Commander and concurring HAF publication approving official.

1.5.3.3. "Tier 2" **(T-2)** requirements are reserved for requirements that potentially put the mission at risk or potentially degrade the mission or program, and may only be waived by the MAJCOM/CC or delegate.

1.5.3.4. "Tier 3" **(T-3)** requirements are reserved for requirements that non-compliance has a remote risk of mission failure, and may be waived by the Wing/CC but no lower than the Sq/CC.

1.5.4. Approval Authority. IAW with AFI 33-360, Publications and Forms Management, approvals and authorities will reside at the lowest appropriate level and commanders may waive non-tiered requirements, but must send a copy of the approved waiver to the OPR of the higher headquarter publication being waived within 30 days of approval. Sending an email to the waived publication OPR that includes a completed AF Form 679, or equivalent will suffice. **(T-2)**

1.6. Supplements. Aircraft specific operating instructions will be published as addenda to this instruction **(T-2)**.

1.7. Requisitioning Procedures. This manual will be provided in electronic form by the OPR **(T-2)**.

1.8. Revisions. Personnel at all echelons are encouraged to submit proposed changes on an AF Form 847 IAW AFI 11-215, *Flight Manuals Program*, through Stan/Eval channels to HQ AFSOC/A3V.

1.9. Use of Nonstandard Publications. Submit all flight publications, aircraft specific addenda to this instruction, and appropriate checklists, either the manufacturer's or unit generated, to HQ AFSOC/A3V for review. HQ AFSOC/A3 will approve addenda to this instruction. Approvals will be complete prior to flight use by aircrew other than any initial cadre. Expanded checklists will be published as part of the addenda to this instruction. Abbreviated checklists (CL) will be published separately as "CLs" **(T-2)**.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. General. The PIC or Mission Commander (MC) will ensure proper military flight following through timely reporting to the appropriate C2 authority **(T-3)**.

2.2. Mission Commander. A MC will be designated when more than one aircraft or crew is deployed away from home station for training, exercises, or other operations. In the case of Operational Aviation Detachments (OADs), follow the guidance in AFSOCMAN 16-101V3, Combat Aviation Advisory Operations. The MC should not be a primary crew member for exercises, but may fly as a crew member on non-exercise missions. MC duties, or PIC duties when MCs are not required, include, but are not limited to: **(T-3)**

2.2.1. Briefing crews on local operating procedures.

2.2.2. Coordinating with ATC, Special Tactics Squadron (STS), range control, users, and others that may have an impact on the mission.

2.2.3. Ensuring personnel have ample and adequate billeting, messing, and transportation arrangements.

2.2.4. Ensuring maintenance personnel know of aircraft status, configuration and fuel requirements.

2.3. Pilot in Command Responsibility and Authority. A PIC is designated for all flights on the AF Form 4327A, Crew Flight (FA) Authorization. PICs are:

2.3.1. In command of all persons aboard the aircraft.

2.3.2. Responsible for the welfare of their crew and safe mission accomplishment.

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

2.3.4. The final mission authority and will make decisions not specifically assigned to a higher authority **(T-2)**.

2.3.5. The final authority for accepting a waiver affecting their crew or mission.

2.3.6. Charged with keeping the commander informed of mission progress and difficulties.

2.4. Mission Clearance Decision.

2.4.1. The final decision to delay a mission may be made either by the PIC or the agency with OPCON when, in the opinion of either, conditions are not safe to start or continue a mission. Final responsibility for the safe conduct of the mission rests with the PIC. If the PIC refuses a mission, it will not depart until the conditions have been corrected or improved so that the mission can operate safely. Another PIC or crew will not be alerted to take the same mission under the same conditions **(T-2)**.

2.4.1.1. Retasking a mission must be authorized by the commander with OPCON. The PIC will notify the controlling agency of any aircraft or aircrew limitations that may preclude mission retasking **(T-3)**.

2.5. Roles and Responsibilities. HQ AFSOC/A3 and HQ AFRC/A3 share responsibility for the management of units utilizing this regulation.

Chapter 3

CREW COMPLEMENT AND MANAGEMENT

3.1. Aircrew Qualification. Personnel assigned as a primary crew member, or occupying a primary crew position during flight, must be qualified (or certified on NIC) or in training for qualification or certification in that crew position and mission **(T-2)**.

3.1.1. Basic qualified or certified crew members may perform primary crew duties on tactical missions when receiving tactical mission qualification training or evaluations from a qualified instructor or flight examiner in their respective crew position.

3.1.2. Noncurrent or unqualified crew members may perform crew duties only on designated training or flight examination missions under the supervision of a qualified instructor or flight examiner in their respective crew position. Current and qualified pilots will occupy pilot positions when passengers are on board IAW AFI 11-401, *Aviation Management* **(T-2)**.

3.2. Crew Complement. Minimum crew complement is as prescribed in the AFM or equivalent and the aircraft specific addendum to this instruction. The OG/CC or equivalent is the waiver authority for all crew positions below the minimum specified by the flight manual or addendum.

3.3. Interfly. The OG/CC is the approval authority for interfly on aircraft under their control. In all cases, the crew will be qualified in the aircraft mission design series (MDS) **(T-3)**.

3.3.1. All CAAs may fly as MEPs on CAA operated aircraft.

3.3.2. For CONUS training purposes, SOCOM personnel may fly as MEPs on CAA operated aircraft with SQ/CC approval **(T-3)**.

3.4. Scheduling Restrictions. IAW AFI 11-202V3.

3.5. Crew Rest. IAW AFI 11-202V3.

3.6. Flight Duty Period (FDP). IAW AFI 11-202V3.

3.7. Alert Procedures. IAW AFI 11-202V3.

Chapter 4

AIRCRAFT OPERATING GUIDELINES

4.1. Objective and Policy. The final responsibility regarding equipment required for a mission rests with the PIC. If one crew accepts an aircraft to operate a mission or mission segment without an item or system, this acceptance does not commit that crew, or a different crew, to subsequent operations with the same item or system inoperative.

4.2. Operating Guidelines.

4.2.1. For aircraft with an MEL; Kinds of Operations Equipment List (KOEL); or equivalent, it is the operating guideline. It lists the equipment and systems considered essential for routine operations and provides guidance on how to operate with degraded equipment. The PIC is the approval authority for operations with degraded equipment within the guidelines of the MEL and needs no further approval. Operating outside of MEL/KOEL guidelines requires OG/CC approval. During flying operations that fall outside the scope of FAR compliant MEL/KOELs, PICs will ensure that equipment necessary for the mission being flown is operational **(T-3)**.

4.2.2. For aircraft without an MEL/KOEL, comply with FAR Part 91.205, *Instrument and Equipment Requirements*, and Part 91.213, *Inoperative Instruments and Equipment*. The PIC determines whether the inoperative instrument or equipment constitutes a hazard to the aircraft or not and is the approval authority for operations with degraded equipment within the guidelines of Part 91 operations. Operating outside of Part 91.205 guidelines requires OG/CC approval **(T-3)**.

4.2.3. For aircraft with MEL/KOELs issued by multiple countries, comply with the MEL/KOEL of the air worthiness certificate issuing authority.

4.2.4. Degraded Equipment. If the PIC elects to operate with degraded equipment or aircraft systems, the PIC should coordinate mission requirements (i.e. revised departure times, fuel requirements, maintenance requirements, etc.) prior to flight with the mission control agency to ensure the decision does not adversely impact follow-on missions.

Chapter 5

AIRLAND OPERATIONS

5.1. Aircraft Maximum Operating Weight Policy. Waiver authority for operations above the maximum takeoff or landing weights listed in the aircraft or POH is OG/CC or COMAFSOF. Waivers will be forwarded to HQ AFSOC/A3V for tracking purposes **(T-2)**.

5.2. Checklists.

5.2.1. The Pilot Flying (PF) will initiate all checklists unless the POH or this instruction establishes an alternate procedure **(T-3)**.

5.2.2. Each aircrew member will use the HQ AFSOC/A3V approved checklist or manufacturers checklist for NIC aircraft, when conducting ground or flight operations **(T-2)**.

5.2.3. Aircrew will complete the Before Landing Checklist or the Traffic Pattern Checklist no lower than 200 feet AGL. Aircraft will be established on final, wings level, with a controlled rate of descent in a position to execute a safe landing no lower than 100 feet AGL.

5.3. Duty Station.

5.3.1. All crew members will be at their duty stations during all takeoffs, low-levels (below MSA), airdrops, landings, and in a threat environment. During other phases of flight, crew members may leave their duty stations to meet physiological needs and perform normal crew duties. A qualified (certified for NIC aircraft) pilot must be at the controls at all times. Notify the PIC prior to departing assigned primary duty station **(T-2)**.

5.3.2. Pilot in-flight seat swaps may be accomplished only with a qualified (certified for NIC aircraft) pilot at the flight controls and above 1,000 feet AGL **(T-3) .**

5.4. Airfield Review.

5.4.1. PICs will review pertinent airfield FLIP to ensure mission requirements can be met.

5.4.2. Airfields included in the Airport Qualification Program (AQP) or AMC's Special PIC Airport program contain distinctive characteristics that create challenging conditions for flight operations. Prior to operating at an AQP airfield, crews must study the AQP report and brief specific risk mitigation considerations during preflight planning **(T-3)**.

5.5. TOLD: Performance data must be computed for all takeoffs and landings **(T-3)**.

5.6. Airfield Requirements: In the absence of aircraft specific guidance published as addenda to this manual, minimum airfield criteria for normal, contingency, and tactical training operations are listed below. Multiple aircraft operations or other unusual circumstances may dictate increased runway and taxiway requirements. All distances must be adjusted for unpaved, wet, soft, slushy, or icy runways and runway slope **(T-3)**.

5.6.1. Normal Operations:

5.6.1.1. Minimum runway length for takeoff is critical field length or balanced field length as appropriate for multi-engine aircraft. For single-engine aircraft, minimum runway length for takeoff is Accelerate/Stop distance if available or takeoff distance to 50 feet AGL **(T-3)**.

5.6.1.2. Minimum runway length for landing is Normal Landing Distance from 50 feet AGL, corrected for environmental conditions. If the aircraft manual does not contain this distance, then use landing ground roll distance plus 50% unless a distance is specified in the aircraft specific addendum **(T-3)**.

5.6.2. Tactical Operations:

5.6.2.1. Minimum runway length for takeoff is charted takeoff ground run plus 500 feet **(T-3)**.

5.6.2.2. Minimum runway length for landing is charted landing ground roll plus 500 feet **(T-3)**.

5.6.3. Minimum runway width for all operations is 200% of wheel track unless specified otherwise in the aircraft specific addendum **(T-3)**.

5.6.4. Minimum taxiway width for all operations is 150% of wheel track **(T-3)**.

5.7. Aircraft Taxi Obstruction Clearance Criteria.

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

5.7.2. When taxi clearance is doubtful, use a wing walker. If wing walkers are unavailable, deplane a crew member if possible to ensure obstruction clearance.

5.7.3. Reverse Taxi. If using reverse taxi, avoid all obstructions by 25 feet. The aircraft should have a window or opening to allow a crew member to verbally direct the pilot and clear the rear of the aircraft. If visibility is not sufficient, the pilot should direct a crew member to exit the aircraft and direct the pilot from outside, using standard marshalling signals. The lack of a crew member to assist in the reverse taxi operations does not prohibit them, however, cautious and conservative decision making are of the utmost importance.

5.8. Landing Zone Operations.

5.8.1. Comply with AFI 13-217_AFSOCSUP, *Drop Zone and Landing Zone (LZ) Operations* during all LZ Operations.

5.8.2. Pre-Brief: Prior to LZ operations, brief the following: run-in orientation, the LZ dimensions, TOLD, significant obstacles, expected markings, planned point of touchdown and its coordinates, go-around point, escape route in the event of a balked landing, communications plan.

5.8.3. Fuel Planning. Plan 20 minutes additional fuel for night operations involving unmarked LZs with less than 10% moon illumination.

5.8.4. Communications. If landing clearance or go-around signals are to be given via radio, two-way communications with the reception committee must be established prior to landing. If comm-out procedures are used, presence of a pre-briefed signal constitutes clearance to land. A signal must be pre-briefed to direct a go-around. Radio clearance to land is the primary method when more than one aircraft is using the landing zone **(T-3)**.

5.8.5. LZ Dimensions. An LZ is suitable for operations when it meets the following obstacle clearance criteria in **Table 5.1** and **Table 5.2**. Runway width requirements can be adjusted in aircraft specific attachments. **WARNING:** These obstacle clearance numbers may not

guarantee safe operations for all aircraft and PICs must ensure unique aircraft clearance requirements are met.

Table 5.1. LZ Lateral Obstruction Clearance.

Runway Width	Twice the distance of the wheel track
Shoulders and Clear Area/Zone (IAW AFI 13-217, *Drop Zone and Landing Zone Operations*)	N/A
Zone A (measured from runway edge)	(Wing Span + Wheel Track) 2
Zone B (measured from runway edge)	(Wing Span + Wheel Track) + (20% Wing Span) 2

Table 5.2. Maximum Obstacle Height.

Single Engine High Wing Zone A - 36" Zone B - 60"
Multi-Engine High Wing Zone A - 36" Zone B - 60"

5.8.5.1. Approach Zone. No obstructions higher than 1 foot for every 35 feet (35:1 or as appropriate for a specific aircraft) in the inner and outer zones as defined in AFI 13-217. See **Table 5.2**.

5.8.5.2. Departure Zone. Base obstruction clearance requirements on predicted aircraft performance IAW the AFM and this instruction. For multi-engine aircraft, pilots will ensure the aircraft can clear obstacles and maintain the appropriate climb gradient with one engine inoperative.

5.9. Engines Running Onload or Offload (ERO). ERO procedures specific to each aircraft will be established. Unit-developed ERO procedures are acceptable when other guidance is unavailable. Aircraft specific addendum should further define how crews will perform EROs **(T-3)**.

5.10. Crew Member Seat Belts. Crew members will have seat belts (or other approved restraint) fastened during critical phases of flight. During taxi, crew members may be out of their seat if duties require and if it is coordinated with the PIC. Pilots should have seat belts fastened at all times unless the mission requires otherwise **(T-3)**.

5.11. Aircraft Lighting. Operate aircraft lighting IAW AFI 11-202V3, and AFI 11-218, *Aircraft Operations and Movement on the Ground*, except when in compliance with contingency requirements or guidance **(T-2)**.

5.11.1. Crews equipped with NVDs are authorized reduced or lights-out operations in restricted areas, warning areas, host-nation approved areas, or designated airfields. Designated airfields shall be documented in a Letter of Agreement (LOA) **(T-2)**.

5.11.2. If Infrared (IR) covers are installed on any of the aircraft lighting systems, the PIC will verify that the other overt lighting systems are operable prior to takeoff.

Chapter 6

GENERAL OPERATING POLICIES

6.1. Aircrew Clothing. The PIC or mission commander will determine whether the crew will wear the aircrew uniform or appropriate functional civilian clothing on all missions.

6.2. Aircrew Flight Equipment Requirements.

6.2.2. Eye Protection. Use protective goggles, plastic lens glasses, or the helmet visor for eye protection if the duties require personnel to be in close proximity to an open exit.

6.2.3. Oxygen. Oxygen on board must be sufficient to accomplish the planned flight. Personal oxygen masks are required for all missions involving any pre-breathing.

6.2.4. Rafts. Ensure sufficient life rafts are on board to accommodate all passengers and aircrew members on overwater flights. Life rafts are not required when overwater flight occurs only for short distances, immediately after takeoff and before landing.

6.2.5. Life Preservers:

6.2.5.1. Life preservers will be sized and available at the crew member's station while overwater. Wear life preservers whenever below 2,000 feet overwater (except takeoff and landing) when outside power-off gliding distance of land **(T-3)**.

6.2.6. Anti-Exposure Suits:

6.2.6.1. Anti-exposure suits will be available during overwater flights when the route of flight is beyond power-off gliding distance from land and the water temperature is 60° F or below **(T-3)**.

6.2.6.2. If the water temperature ranges between 51° F and 60° F, the unit or mission commander may waive or extend the anti-exposure suit requirement after carefully considering the following factors:

6.2.6.2.1. Climate zone and existing weather throughout range of flights.

6.2.6.2.2. Operational requirements.

6.2.6.2.3. Number and type of aircraft in formation.

6.2.6.2.4. Time of flight overwater.

6.2.6.2.5. Risk, based on aircraft load and mission configuration.

6.2.6.2.6. Location, availability, and capability of search and rescue (SAR) forces, (consider anticipated time in the water prior to pick-up).

6.2.6.2.7. Winds and wave height and their impact on SAR.

6.2.6.2.8. Altitude and distance from land.

6.2.6.3. Anti-exposure suits are not required when only the approach or departure is flown overwater.

6.2.7. Restraining Device. Crew members will wear a restraining device when near open doors or hatches inflight **(T-3)**.

6.3. Personal and Professional Equipment. Crew members will carry or wear personal and professional equipment as follows:

6.3.2. Crew members will preflight NVGs prior to each mission if required. Log the visual acuity attained with the serial number of the NVGs. PICs should ensure a spare set of NVGs are pre-flighted. For dual piloted aircraft, both pilots should wear the same model of NVGs.

6.3.3. Flight Kits. Carry a headset and operable flashlight on all flights.

6.4. Authenticators and Classified Documents. Obtain and safeguard current authenticators and other classified materials required for the area being transited. Carry authenticators when flying into an Air Defense Identification Zone (ADIZ), participating in exercises, on overseas missions, deployments, and when specified in operation plans.

6.5. Publications and Aircraft Documentation.

6.5.2. The PIC will ensure the following is carried on the aircraft:

6.5.2.1. Aircraft Manual and applicable navigation publications.

6.5.2.2. Normal and Emergency Procedures checklists.

6.5.2.3. Tactical checklists, when required.

6.5.2.4. NIQ/NIC aircraft should contain an appropriate and current airworthiness certificate unless certified as “experimental”, effective registration certificate, Radio Station Permit for overseas missions, and appropriate Weight and Balance information. Additionally, for large and turbine-powered multi-engine airplanes the PIC will ensure one-engine inoperative climb performance data and engine inoperative procedures are accessible during flight **(T-3)**.

6.5.2.5. Electronic flight bags (EFBs) may be used IAW AFI 11-202V3, AFSOC Supplement, to satisfy some of the above requirements.

6.6. Flight Crew Information File (FCIF). Review Volume 1, Part A, of the FCIF before all missions.

6.6.2. Crew members delinquent in FCIF review and joining a mission en route will receive an FCIF update from their primary aircrew member counterpart on that mission. Instructor pilots who fly with key staff are responsible for briefing appropriate FCIF items **(T-3)**.

6.6.3. Crew members not assigned or attached to the unit will certify FCIF review by entering the last FCIF number and their initials beside their name on the file copy of the flight authorization **(T-3)**.

6.7. One-Time Flights. An aircraft may be released for a one time flight with a condition that might be hazardous for continued use provided the aircraft is airworthy for one flight to another station. A one-time flight is defined as a required flight to a final destination including required fuel stops **(T-3)**.

6.7.2. The owning maintenance group commander, civilian maintenance equivalent, or delegated authority must authorize this release. Refer to TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures,* and paragraph **4.7** for additional guidance **(T-3)**.

6.7.3. The OG/CC or COMAFSOF must authorize the flight after maintenance has released the aircraft for flight operations **(T-3)**.

6.8. Single Pilot Ops. Aircraft certified for single pilot operations may be flown single pilot. It is recommended that an additional rated crew member occupy the additional seat and assist during flight duties, if available.

6.9. Checklist Procedures.

6.9.1. Accomplish all checklists with strict discipline. A checklist is not complete until all items are accomplished.

6.9.2. The pilot flying the aircraft will initiate all checklists unless another procedure is established by the aircraft manual or addendum to this instruction **(T-3)**.

6.10. Flight Plans.

6.10.1. Regardless of whether a flight plan is prepared by the aircrew or is furnished by another agency, the PIC will verify the routes and altitudes to ensure proper terrain clearance and fuel requirements **(T-3)**.

6.10.2. Unscheduled changes in crew, passenger, and aero medical patient lists are authorized provided corrections to the crew list or passenger manifest (DD Form 2131) are filed with the command and control center, base operations, Federal Aviation Administration (FAA) office, or airport manager's office, as appropriate to the airfield being transited.

6.10.3. Crews may use computer flight plans and HQ AFSOC/A3V approved flight plan forms in lieu of the AF Form 70, Pilots Flight Plan and Flight Log.

6.11. Fuel Planning. Use the aircraft flight manual for fuel planning. Calculate reserves IAW AFI 11-202V3.

6.12. Alternate Planning. IAW AFI 11-202V3.

6.13. Departure Planning. IAW AFI 11-202V3 and AFMAN 11-217, *Flight Operations.*

6.14. Passenger Policy. DOD 4515.13-R, *Air Transportation Eligibility*, establishes criteria for passenger movement on DOD aircraft. It defines five categories of passenger travel: space-available, aeromedical evacuation, orientation, public affairs, and space-required. AFI 11-401, *Flight Management*, provides further guidance on orientation and public affairs travel. Refer to these publications directly for details not addressed in this instruction. In all cases, passengers will be manifested on DD Form 2131, *Passenger Manifest* **(T-0)**.

6.14.2. Space-Available. Aircraft covered by this instruction should not be used for space-available travel. OG/CC may authorize space-a on a case by case basis **(T-3)**.

6.14.3. Orientation Flight Restrictions.

6.14.3.1. For spouse orientation, comply with restrictions in AFI 11-401 and applicable supplements. Additionally, air refueling (when applicable) is prohibited.

6.14.3.2. For other orientation categories, pilots must be fully qualified. Simulated EPs are prohibited. All other mission events may be conducted IAW the profile approved by approval authority listed in AFI 11-401.

6.14.4. Public Affairs Travel. Defined as travel in the interest of adding to the public understanding of DOD activities. AFI 11-401 contains specific details on the Air Force Public Affairs Flight Program. Authorized participants and approval authority are contained in AFI 11-401. Document authorization by letter and manifest on DD Form 2131. Requests for approval will include the mission profile and mission events to be accomplished. Forward all requests through public affairs channels.

6.14.4.1. Restrictions. Pilots must be fully qualified. Simulated EPs are prohibited. All other mission events may be conducted as approved by approval authority. Passengers will be seated with belts fastened during threat maneuvers **(T-2)**.

6.15. Flight and Maintenance Log. Review the aircraft maintenance forms prior to flight. Ensure that the fuel card is aboard the aircraft and applicable preflight is documented before flight.

6.16. Aircraft Servicing and Ground Operations.

6.16.2. Concurrent Ground Operations. Simultaneous aircraft refueling or defueling and cargo loading or maintenance operations are authorized IAW TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bounding*.

6.16.3. Towing. The PIC is responsible for coordinating safe towing operations.

6.17. Crew Coordination. The pilot flying will brief the crew on the departure, arrival, and landing IAW applicable briefing guides and addendums. The crew will monitor the profile and report any deviations from prescribed procedures as able.

6.17.2. Go-Around Calls. If any crew member calls “Go-around” the PF will immediately apply proper go-around procedures.

6.17.3. Aborted Takeoff. If any crew member calls “ABORT, ABORT, ABORT” during takeoff roll, the PF will immediately discontinue takeoff.

6.17.4. Aircrew Duties. Aircrew will backup pilots on safety of flight through visual scan, use of onboard mission situational awareness software/moving map, or other mission tools, such as sensors, as able.

6.18. Advisory Calls. Mandatory advisory calls during instrument approaches for the pilot not flying the aircraft are as follows:

6.18.2. Non-precision approaches:

6.18.2.1. One hundred feet above minimum altitudes.

6.18.2.2. "Minimums" at MDA.

6.18.2.3. "Runway in sight." Called when sufficient visual reference with the runway environment is established.

6.18.2.4. "Go-around." Called at the missed approach point when visual reference with the runway environment is insufficient to continue the approach or any time the approach becomes unsafe.

6.18.3. Precision approaches:

6.18.3.1. One hundred feet above DH.

6.18.3.2. "Continue." Call at DH if only the approach light system is in sight and a determination cannot yet be made that the aircraft is in a position for a safe landing. If an approach is continued below DH based on seeing the approach lights only (an approach to visibility minimums), "go-around" must be called by 100 feet if a determination to land cannot be made.

6.18.3.3. "Land." Call at DH or later if runway environment is in sight and the aircraft is in a position for a normal landing.

6.18.3.4. "Go-around." Call at DH or later if the runway environment is not in sight or if the aircraft is not in a position for a safe landing. If an approach is continued below DH based on seeing the approach lights only (an approach to visibility minimums), "go-around" must be called by 100 feet if a determination to land cannot be made.

6.18.4. Climb out:

6.18.4.1. Transition altitude.

6.18.4.2. One thousand feet below assigned altitude.

6.18.5. Descent:

6.18.5.1. Transition level.

6.18.5.2. One thousand feet above assigned altitude.

6.18.5.3. One thousand feet above initial approach fix altitude or holding altitude.

6.18.5.4. One hundred feet above procedure turn and final approach fix altitude.

6.19. Wake Turbulence Avoidance. AFSOC light fixed wing aircraft will maintain two minute spacing behind small aircraft and three minutes behind large and heavy aircraft. This requirement does not apply between like or smaller aircraft **(T-2)**.

6.20. Classified Material.

6.20.2. Turn in authenticators and other classified materials at destination, and obtain receipts for classified material. Command posts will provide temporary storage for authenticators and classified materials during ground time at en route stops. Issue and turn-in of authenticators normally is a function of base operations. At locations where no storage facilities exist, the PIC will ensure classified material is properly protected.

6.20.3. Remove any classified information in the Flight Management System (FMS), Internal Navigation System (INS), Area Navigation (R-NAV), or GPS.

6.20.4. In an emergency, if possible, attempt to destroy or damage classified material and equipment prior to crash landing or bailout.

6.21. Impoundment. If an aircraft is involved in a serious incident, which in the judgment of the PIC places the airworthiness of the aircraft into question, the PIC will impound the aircraft immediately after landing and contact the controlling agency for further instructions.

6.22. Maintenance Debrief. The PIC is responsible for ensuring aircraft maintenance forms are correct and maintenance personnel are thoroughly debriefed on the conditions of the aircraft.

6.23. Crew Debriefing. The PIC will allow each crew member the opportunity to discuss unusual aspects and lessons learned from the mission. The appropriate forms will be completed and

available for review by the commander or operations officer as soon as practical after mission completion.

6.24. Aircrew Notification Procedures. When transiting installations, the PIC will establish a point of contact with base operations or local airport manager when crew-resting off base. The PIC will be notified immediately in case of incident or emergency affecting the safety or security of the aircraft.

6.25. Hazardous Material Procedures. The term "hazardous material" includes any material, which, because of its quantity, properties, or packaging, may endanger human life or property. Procedures in this paragraph apply whenever aircraft carry DOD Hazard Class or Division 1.1, 1.2, 1.3 explosives, DOT Class A and B poisons, etiological or biological research materials, radioactive materials requiring yellow III labels, and inert devices. Also included are DOD Hazard Class or Division 1.4 explosives, oxidizers, compressed gases, flammable solids and liquids, and corrosive liquids listed in Air Force Manual (AFMAN) 24-204, *Preparing Hazardous Material for Military Air Shipment* when any of these are shipped in quantities of 1,000 pounds or more (gross weight).

6.25.2. Briefing. Ensure the entire crew is briefed completely on the type and quantity of hazardous material, and complete a risk assessment.

6.25.3. Cargo Documentation. Do not accept hazardous materials unless proper documentation, certification, and identification of cargo are provided. This includes Transportation Control Number (TCN) entered correctly on both the cargo manifest and the DD Form 1387-2, *Special Handling Data/Certification*.

6.25.4. Flight Planning. The PIC (unless specifically briefed otherwise):

6.25.4.1. Enters "Hazardous Cargo" and the mission number in the appropriate section of the flight plan. (Use remarks section of DD Form 175, *Flight Plan, Military*).

6.25.4.2. Plans the flight to minimize over flying heavily populated or otherwise critical areas.

6.25.4.3. Prepares a departure message. The remarks section of the departure message should include the following information:

6.25.4.3.1. DOT class and DOD Hazard class or division, if applicable, of hazardous material on board. (Include net weight of DOT Class A or B poisons and net explosive weight (NEW) of Class A or B explosives).

6.25.4.3.2. Request for special support; e.g., isolated parking, security, technical escort teams, etc.

6.25.4.3.3. Inert devices (when applicable).

6.25.4.3.4. If Estimated Time En route (ETE) is less than 1 hour, or if other circumstances preclude timely receipt at destination, notify the base operations of first intended landing, by priority telephone, of the Estimated Time Arrival (ETA) and information listed in paragraph **6.25.3**.

6.25.5. Before Engine Start. Ensure placards are removed. Give the controlling agency parking location, approximate engine start time, and verify that the fire-fighting agency has the

hazardous materials information; otherwise, request the following be relayed to the fire-fighting agency:

6.25.5.1. Department of Transportation (DOT) class of hazardous material aboard and the DOD hazard class or division for explosive material aboard.

6.25.5.2. Net Explosive Weight (NEW).

6.25.5.3. Request for isolated taxiing (if necessary).

6.25.5.4. Estimated time of departure (ETD).

6.25.6. En Route. Normal procedures apply. Avoid flying over metropolitan or otherwise critical areas.

6.25.7. Before Landing. Accomplish the following unless specifically prohibited by the theater commander or FLIP planning.

6.25.7.1. Contact the base operations dispatcher, control tower, approach control, or other agency specified in FLIP at least 30 minutes (or as soon as practical) before ETA to announce that "hazardous materials" are aboard and to verify that the appropriate base support agencies have received the departure message; otherwise, transmit the mission number, ETA, and information listed in paragraph **6.25.3**.

6.25.7.2. If landing at a CONUS civil airport without a tower, give the above information to the nearest FAA flight service station.

6.25.7.3. Request the information is relayed immediately to base operations or the civil airport manager, crash or fire protection agency, and other support activities.

6.25.8. Parking:

6.25.8.1. DOD requires aircraft carrying DOD Hazard Class or Division 1.1, 1.2, explosives, DOT Class A poisons, and certain biological agents and munitions are parked in areas isolated from personnel. PICs are responsible for ensuring cargo is correctly identified to the tower and ground control. When aircraft are not directed to an isolated area, identify the cargo again to tower or ground control. When identification is acknowledged, the host is solely responsible for the selected parking area. Should host procedures be questionable, submit trip reports or hazard reports, as appropriate, to document such occurrences.

6.25.8.2. The military host is responsible for placarding aircraft. When missions operate on nonmilitary installations, the briefing to the PIC will include placarding requirements and, if required, placards will be furnished at the onload base. The shipper must make prior arrangements with the airport manager for shipments of hazardous materials requiring placarding. The shipper is responsible for cargo identification, fire-fighting procedures, and isolated parking requirements **(T-3)**.

6.25.9. Unscheduled Landing Due to Inflight Emergency With Hazardous Materials. Transmit unclassified information to the appropriate air traffic control facility as follows:

6.25.9.1. Nature of emergency and intent to land.

6.25.9.2. Aircraft position and ETA.

6.25.9.3. Number of personnel and location in aircraft.

6.25.9.4. Fuel on board.

6.25.9.5. That hazardous materials are aboard, location of the cargo, and applicable information listed in paragraph **6.25.3**.

6.25.10. After Unscheduled Landing. Contact the appropriate C2 agency, giving arrival notice, hazardous materials information and other pertinent information as required.

6.26. Hazardous Medical Equipment.

6.26.2. Nonstandard equipment possessed by medical facilities that use AFSOC air evacuation services should be viewed as potentially hazardous. Two types of equipment are of major concern:

6.26.2.1. Electronic medical equipment produces Electromagnetic Interference (EMI), which is commonly beyond the limits specified by MILSTD 461A and 462, and therefore can interfere with aircraft communication and navigation equipment.

6.26.2.2. Therapeutic oxygen systems present an increased hazard of fire or explosion. A potential but real hazard is the inadvertent disruption of the cylinder neck, manifold, or regulator resulting in explosion and propulsion of the container or accessories.

6.26.3. Nonstandard electronic and oxygen equipment must be listed by manufacturer and model number in the current "Status Report on Medical Material Items Tested and Evaluated for use in the USAF Aeromedical Evacuation System, USAF School of Aerospace Medicine (USAFSAM), Wright-Patterson AFB".

6.26.4. For nonstandard electronic medical equipment, take the following precautions:

6.26.4.1. Pararescue personnel must inform the PIC when nonstandard electronic equipment is brought on board the aircraft.

6.26.4.2. The PIC must be informed of the anticipated period of use of the equipment during the mission.

6.26.4.3. The PIC must be alert for any interference with aircraft communication or navigation equipment during periods of use of this equipment.

6.26.4.4. When continuous use of the equipment is required throughout the duration of the mission, flight must be restricted to VFR conditions. Furthermore, exercise additional caution on night VFR missions to ensure there are no adverse effects on navigational equipment.

6.26.5. For nonstandard oxygen equipment, take the following precautions:

6.26.5.1. All compressed oxygen equipment with exposed, unprotected cylinder neck, manifold, or regulators must be completely secured from all movement in its longitudinal and lateral axis.

6.26.5.2. Pararescue personnel must continually monitor the operation of the equipment to detect possible malfunction during exposure to altitude.

Chapter 7

AIRCRAFT SECURITY

7.1. General. This chapter provides guidance on aircraft security, inflight and on the ground. Aircrews must make every reasonable effort to resist an aircraft hijacking. Resistance may vary from dissuasion to direct physical confrontation, including the use of weapons. Due to the sensitive nature of anti-hijacking procedures, crew members should reference AFI 13-207, *Preventing and Resisting Aircraft Piracy (FOUO)*, and the Flight Information Handbook (FIH) for specific guidance. Aircrews will not release any information concerning those procedures or hijacking attempts.

7.2. Security. IAW AFI 31-101, *Integrated Defense*, AFSOC aircraft are Protection Level (PL) 3 and 4 resources. This security priority designation applies to operational aircraft, wherever they are located, worldwide. Some aircraft contain equipment and documents that require protection per DOD 5200.01, *DOD Information Security Program*, Volumes 1-4, and AFI 31-401, *Information Security Program Management*.

7.3. Procedures. The planning agency must ensure adequate en route force protection is available. The amount of force protection required will vary, depending on location, threat, and ground time. MCs will receive an aircraft security recommendation from their local threat working group based on current intelligence reporting and local/regional threat status using the aircraft security recommendation matrix IAW AFSOCI 31-100, *Special Operations Security Forces Deployment Planning and Operations*. Tailored security measures at deployed locations must be approved by the MC and the C2 organization must be notified as soon as possible. During both emergency and unscheduled landings at unplanned airfields, the MC or PIC will assess the security situation and take the following actions: **Note**: If the aircrew is not capable of providing adequate security, the MC or PIC will request and coordinate security through available channels and notify the C2 agency as soon as possible **(T-3)**.

7.3.1. Area Patrol/Security Response Team (SRT). Request area patrol/SRT coverage from local security forces to include backup response forces commensurate with PL 3 requirements specified in AFI 31-101. If local authorities request payment for this service, use AF Form 15, *USAF Invoice.*

7.3.2. Aircrew Surveillance. Direct armed personnel to remain with the aircraft and maintain surveillance over aircraft entrances and activities in the vicinity of the aircraft. Obtain a means to report suspicious or hostile activity to security forces (e.g., land mobile radio, etc.).

7.3.3. Departure without Crew Rest. If local security forces are unacceptable or unavailable and the crew is not augmented with security forces, the PIC is authorized to exceed FDP restrictions and depart as soon as possible for a destination with adequate force protection. If unable to depart the location due to system malfunction, coordinate through home station channels to acquire force protection support.

7.3.4. Unauthorized Entry. If, in the PIC's judgment, the aircraft needs to be locked and sealed as a measure to detect unauthorized entry:

7.3.4.1. Use the aircraft lock. (**Note**: The aircraft will be locked during all off-station missions remaining overnight).

7.3.4.2. If the aircraft lock is unavailable, secure the hatches and doors in a manner that will indicate unauthorized entry. For example, tape inside hatch release handles to the airframe, so that entry pulls the tape loose; close and seal the doors or using a metal boxcar seal or other controllable device to identify forced entry; wipe the immediate area around the seal clean to help investigate forced entry. If the seals are damaged or have been tampered with, notify the appropriate local authorities, the controlling agency, and inspect the aircraft thoroughly **(T-3)**.

7.3.4.3. Coordinate with the local base operations representative on procedures for servicing the aircraft while the crew is away. If a padlock is used, the key or combination will be left with base operations or the representative for servicing and maintenance personnel **(T-3)**.

7.3.4.4. For non-permissive or uncertain environments, airfield and LZ security is the responsibility of the agency requesting support. Crew will work with the agency requesting the support to insure security meets the requirements for the mission **(T-3)**.

7.4. Protective Standards for Aircraft Carrying DVs. This paragraph applies specifically to aircraft transporting DVs Code 4 or above. PICs are responsible for aircraft security at en route stops.

7.4.1. DOD Installations. Notify the base security forces of estimated arrival and departure times. Request continuous security surveillance during the entire ground time. If the installation is unable to comply, arrange for the best protection available.

7.4.2. Non-DOD Installations. Contact the airport manager or installation commander to arrange for force protection. If available security is inadequate, purchase additional security using AF Form 15, *USAF Invoice*.

7.5. Arming of Crew Members. When directed, at least one crew member each from the flight deck and cargo compartment will carry weapons. Follow arming requirements of AFI 31-117, *Arming and Use of Force by Air Force Personnel.*

7.5.1. Issue. Before departing home station, authorized crew members will obtain weapons, ammunition, lock, and key. Crew members must present a current AF Form 523, *USAF Authorization to Bear Firearms*, to be issued a weapon. Crew members will be reissued the same weapon until the mission terminates at home station. If an armed crew member must leave the crew en route, transfer the weapon to another authorized crew member, using AF Form 1297, *Temporary Issue Receipt* **(T-2)**.

7.5.2. Loading and Transfer of Weapons. AFMAN 31-229, *USAF Weapons Handling Manual*, outlines safety requirements for personnel arming and weapons handling. Load and unload weapons at approved clearing barrels if available. To transfer a loaded weapon to another crew member, place the weapon on a flat surface. Do not use a hand-to-hand transfer.

7.5.3. Wearing of Weapons. Wear weapons in a holster, concealed at all times to protect the identity of armed crew members. Do not wear weapons off the flightline, except to and from the armory, and other facilities associated with aircrew activities such as base operations, fleet service, cargo or passenger terminals, flightline cafeterias, snack bars, etc. However, local threat assessments and deployment planning factors may dictate more stringent arming requirements.

7.5.4. Weapons Storage Inflight. Crew members will be armed before beginning pre-flight or onload duties. When no passengers are on board and after a satisfactory stowaway check, weapons may be stored in a gun box (if equipped) inflight. Crew members will rearm before landing. Weapons need not be unloaded before being placed in the gun box **(T-3)**.

7.5.5. Crew Rest. During crew rest, store weapons in the most secure facility available, normally the base armory. If a weapons storage facility is unavailable or the country prohibits or restricts the entry of weapons, secure firearms and ammunition in the gun box.

7.5.6. Aircraft without a Gun Box. If an aircraft without a gun box must remain overnight at a location where a government-owned storage facility is unavailable, use the nearest acceptable facility. Acceptable storage facilities are US or Allied military services armories, US National Guard and Reserve armories, and US civil law enforcement armories. If none of these are available, or the PIC believes weapons security may be compromised, crew members may secure their weapons in their quarters, but one crew member must remain with the weapons at all times. In this case, turn the ammunition over to the PIC **(T-3)**.

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

7.6.1. Acceptance of Passengers. The host station passenger processing and manifesting facility should conduct anti-hijacking inspections. Do not board passengers unless the PIC is fully satisfied with these inspections. **Exception**: Supporting and supported forces may be anti-hijack inspected at the aircraft by the aircrew.

7.6.2. Aeromedical Procedures. Military medical facility commanders are responsible for the anti-hijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections before departure **(T-3)**.

7.6.3. Contingency and exercise movements. During contingencies in support of combat operations involving the movement of large numbers of personnel and exercises, the supported unit should manifest passengers and perform anti-hijacking inspections.

7.6.4. Arms and Ammunition. Passengers will not carry weapons or ammunition on their person or in hand-carried baggage on board an aircraft except special agents and guards of the Secret Service or State Department, and other individuals specifically authorized to carry weapons **(T-3)**.

7.6.4.1. Take every precaution to prevent accidental discharge of weapons. If individuals must clear their weapons, ask them to:

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

7.6.4.1.2. Clear their weapons IAW standard safety procedure.

7.6.4.2. Troops and deadhead crew members will not retain custody of ammunition on an aircraft but will turn it in to the troop commander or PIC. Troops may carry unloaded weapons and ammunition on board the aircraft during combat operations. When the situation dictates, weapons may be loaded at the order of the troop commander or team leader **(T-3)**.

7.7. Specific Hijacking Guidance. It is imperative that all crew members are familiar with the ground and inflight resistance actions, covert communications, and forced penetration of unfriendly airspace procedures in AFI 13-207 and the FIH. In the event of a hijacking, crew members must act immediately and resourcefully, without instruction, in order to counter the attacker successfully.

Chapter 8

MISSION EMPLOYMENT

8.1. General. This section is aircraft and mission agnostic or multi-mission employment and is meant to be used in conjunction with the mission specific chapters. Mission specific employment procedures are in the mission chapters: **Chapter 11** for specialized mobility, **Chapter 12** for ISR, and **Chapter 13** for adaptive precision strike.

8.2. Flare Policy.

8.2.1. Dispense flares IAW controlling agency procedures and restrictions. When over water, dispense flares at least 3 NM from any surface vessel, platform, or landmass. Follow regulations for local agency notification prior to flare usage.

8.2.2. If flares have been dispensed during flight, a hung flare check must be accomplished upon next landing. The PIC will deplane a crew member or have ground personnel visually inspect dispensers to ensure that there are no hung flares. A hung flare is a flare that has partially fired or is extended from the magazine. Missing flare endcaps should not be considered hung flares.

8.2.3. If a hung flare is detected, follow local airfield hung flare procedures. If hung flare procedures do not exist at stopping location, park the aircraft at least 300 feet away from other aircraft, flight line equipment, or personnel.

8.3. Laser Operations.

8.3.1. Laser Usage. Lasers will be employed in accordance with established tactics. Prior to employing a laser, proper coordination must be accomplished with all aircrew members and with all supporting members on the ground. At no time will any laser be fired over the horizon. All air-to-surface laser operations on-range will be IAW AFI 13-212, *Range Planning and Operations*, this instruction, and local range procedures. Off-range laser emissions are authorized IAW AFI 11-214, *Air Operations Rules and Procedures* **(T-2)**.

8.3.2. Safety. The nominal ocular hazard distances for all lasers should be detailed in the manufacturer's handbook. Any crew member observing adverse weather conditions (i.e., clouds, smoke, etc.) that may cause laser energy to be reflected back into the aircraft should notify the crew immediately.

8.3.3. Laser Arming. The PIC is the authority for the arming of all lasers. Prior to arming, the crew member will state which laser they have selected. **WARNING**: Crew members will not use binoculars during any lasing operations where a reflection hazard exists **(T-3)**.

8.4. Laser Employment Guidance for Training Missions:

8.4.1. Eyesafe Rangefinder/Training Laser. An eyesafe training laser may be employed during any training mission.

8.4.2. Visible Laser. The visible laser will not be employed outside the boundaries of a military installation or range. The visible laser will not be employed inside the airspace of an active military airfield unless prior approval has been granted. While using a visible laser on a military installation or range, as part of an approved training event, only a visible laser which

is eyesafe to all persons on the ground can be directed at any person, vehicle, or building **(T-3)**.

8.5. IR Pointer.

8.5.1. Aircrew will adhere to the IR pointer non ocular hazard distance (NOHD) for all operations. During training, the aircrew should limit the exposure of any "non-player" persons, vehicles, or buildings to the greatest extent practicable **(T-3)**.

8.5.2. Due to the potential distraction to NVG operations, the IR pointer will not be employed at night inside the airspace of an active airfield unless prior approval has been granted **(T-3)**.

8.6. Laser Designator. The laser designator will only be fired in combat or on laser-approved ranges. If ground parties are present they will be advised prior to laser arming to ensure they have taken safety precautions **(T-2)**.

8.7. CASEVAC Operations. Crews will be prepared to facilitate CASEVAC operations as a contingency platform. During these operations, maintaining safe flight operations is paramount while attempting to meet medical requirements and communicate the medical situation forward to the destination **(T-3)**.

Chapter 9

TRAINING POLICY

9.1. General. This chapter outlines procedures, requirements, and restrictions for training and evaluation missions. See AFI 11-202V1 and V3, and AFMAN 11-219V1, for additional information. **Note:** The following guidance is in addition to manufacturer restrictions or limitations. Manufacturer guidance will always be followed unless the following guidance is more restrictive (e.g.: higher altitudes, higher airspeeds, etc.) **(T-3)**.

9.2. Threat Maneuver Training. Do not begin the maneuver unless all personnel are properly restrained. Crew members will clear the aircraft of obstacles throughout the maneuvering.

9.3. Touch-and-Go Landings.

9.3.1. Minimum runway for touch-and-go landings is IAW AFMAN 11-217V1 and AFI 11-202V3 and is calculated landing distance plus calculated takeoff distance at current gross weight, environmental conditions, aircraft configuration, obstacles, and runway end crossing height.

9.3.2. Decision Point. Based on TOLD, the PF will clearly identify a decision point to continue a touch-and-go versus full stop to ensure adequate runway length remaining.

9.3.3. Wet Runways. Stop-and-go or touch-and-go operations are prohibited when crosswinds exceed 75% of the crosswind limitations listed in the POH.

9.3.4. Icy Runways. Stop-and-go or touch-and-go operations are prohibited on icy runways.

9.3.5. Ceiling and visibility must be at least 300 feet and ¾ mile (RVR 40) **(T-2)**.

9.4. Simulated Emergency Procedures.

9.4.1. Simulated Flame Out (SFO). Practice SFOs only under VMC conditions with an IP or IP candidate in one of the pilot seats. An IP candidate requires an IP wingman, if applicable. The IP will study the terminal or off-airfield area for hazards and obstacles prior to the mission and maintain a visual scan throughout the maneuver **(T-3)**.

9.4.1.1. Practice turn backs are prohibited in the aircraft.

9.4.1.2. SFO Conditions.

9.4.1.2.1. Initiate simulated engine failure no lower than 1000 feet AGL (single engine) or 300 feet AGL (multi-engine).

9.4.1.2.2. The IP will initiate the SFO in safe flight parameters. For multi-engine aircraft, the simulated failed engine should be set at zero-thrust at an airspeed greater than best climb speed single engine (Vxse) or minimum control speed (Vmc) +5, whichever is greater unless simulating an engine failure at V1 at a safe altitude.

9.4.1.2.3. The IP will move the power lever to a power setting equivalent to zero thrust once the PF verbalizes the proper engine-out actions, or upon initiation of the simulated emergency if an auto-feather system should normally function. This is not a transfer of controls, the PF retains control of the power lever and may conduct a go-around or recovery at any point.

9.4.1.2.4. With an IP in the seat, pilots may fly the SFO Emergency Landing Pattern (ELP) to a landing. If ELPs are flown to a touch-and-go or stop-and-go landing, brief a clear intended point of go-around and reject point on the runway. Additionally, the IP will direct a go-around at 100 feet AGL if the aircraft is not stabilized in a safe position to land or it becomes apparent that the airspeed will fall below safe flying airspeed for the configuration.

9.4.1.2.5. Multi-Engine aircraft should use all engines for touch-and-go takeoffs.

9.4.1.3. Practice Straight-Ahead SFO. Terminate straight-ahead SFOs not lower than 500 feet AGL.

9.4.1.4. Off-Airfield SFO.

9.4.1.4.1. Only accomplish in VMC under VFR. NVGs must be used during nighttime and illumination must be 40% or better **(T-3)**.

9.4.1.4.2. Terminate the off-airfield SFO no lower than 500 feet AGL. In sparsely populated areas, daytime only, off-airfield SFOs may be terminated no lower than 200 ft AGL, provided it is flown in an area evaluated for obstacles using the current Vertical Vector Obstruction Database (VVOD) and CHart Update Manual (CHUM).

9.4.1.5. SFO Termination Criteria.

9.4.1.5.1. The IP (or any crewmember) will terminate the SFO by commanding "GO AROUND" if at any point during the maneuver the aircraft limitations are exceeded, a stall is indicated, or if continued maneuvering would not result in a safe landing.

9.4.1.5.2. Terminate simulated emergencies when an actual emergency arises.

9.4.2. Practice Aborted Takeoff. Authorized during VMC, with or without NVGs. Crosswind component must not exceed 75% of the maximum demonstrated crosswinds listed in the POH. The runway must be dry and long enough to meet normal takeoff distance requirements **(T-3)**.

9.4.3. Actual Engine Shutdown/Propeller Feathering and Air Start. One engine may be shutdown in day VMC only at a minimum of 5,000 feet above the ground or cloud deck, whichever is higher. Do not shutdown the engine unless the aircraft can remain clear of clouds and recover and land under visual flight rules.

9.5. Confidence Maneuvers.

9.4.4. Steep Turns. Determine stall speeds prior to making turns. Authorized in day VMC only at a minimum of 3,000 feet AGL, 3,000 feet above the cloud deck, or the manufacturer's recommended altitude, whichever is higher. Do not exceed published aircraft limitations.

9.4.5. Air Minimum Control Speed (Vmca) Demonstration. Stall speed and engine inoperative minimum control should be determined prior to flight. Authorized in day VMC only, at a minimum altitude so that recovery is completed by 3,000 feet AGL, 3,000 feet above the cloud deck, or the manufacturer's recommended altitude, whichever is higher. Initiate recovery at the first recognition of loss of directional control by simultaneously reducing the power on the operating engine and/or reducing the angle of attack as necessary to regain directional control and airspeed. **CAUTION**: There is a density altitude above which the stall speed is higher than the engine inoperative minimum control speed. When this density altitude exists below 3,000 AGL because of high elevations, high temperatures, or both, an effective flight demonstration

of loss of directional control may be hazardous and should not be attempted. If it is determined prior to flight that the stall speed is above or equal to VMC, this flight demonstration is impracticable.

9.5.1. Stalls: Determine actual stall speeds prior to performing maneuvers.

9.5.1.1. Power-Off Stalls. Authorized in day VMC only, at a minimum altitude so that recovery is completed by 3,000 feet AGL, 3,000 feet above the cloud deck, or the manufacturer's recommended altitude, whichever is higher. The stall may be entered from either straight or turning flight in the approach and landing configuration. Initiate recovery at the prebriefed point (when buffet or decay of control effectiveness is encountered or actual stall is reached) or any abnormal engine indication is discovered.

9.5.1.2. Power-On Stall. Authorized in day VMC only at a minimum of 3,000 feet AGL, 3,000 feet above the cloud deck, or the manufacturer's recommended altitude, whichever is higher. In some high performance aircraft, the power setting for power-on stalls may have to be reduced below takeoff power to prevent excessive high pitch attitudes (greater than 30° nose up). In the absence of a manufacturer or addendum recommended power setting, use no more than approximately 55-60 percent of full power as a guideline. The stall should be entered in the takeoff or departure configuration and at V2. Initiate recovery when buffet or decay of control effectiveness is encountered, actual stall speed is reached, engine RPM decay is detected, or any abnormal engine indication is discovered, whichever occurs first.

Chapter 10

Chapter 11

ADAPTIVE MOBILITY

11.1. General. This chapter provides specialized mobility guidance.

11.2. Passenger Restraints:

11.2.1. Provide a safety belt for all occupants. Occupants will fasten seat belts or approved alternate restraints prior to takeoff and will not be removed until after landing unless authorized by the PIC or required to meet physiological needs or perform mission related duties **(T-3)**.

11.2.2. Floor Loading. Floor loading is authorized to support dedicated special operations forces team members during contingencies, exercises, or training. The loadmaster should ensure a tie-down strap is rigged for each row of personnel to provide forward restraint and body stability. The special operations forces team members should provide their own restraining devices **(T-3)**.

11.3. Troop Security. Accomplish troop security by one of the following methods in descending order of preference:

11.3.1. Seatbelts or snap links attached to tie-down rings on the cabin floor.

11.3.2. Five thousand (5,000) pound tie-down straps.

11.3.3. Except for primary, additional aircrew, and special operations forces team members, all cabin occupants must be seated with seat belts fastened during taxi, takeoff, approach and landing. Passengers authorized flight on tactical missions may be secured by alternate methods for takeoffs and landings provided they do not interfere with primary crew members' duties. Reference **Table 11.1** and AFI 11-401 **(T-2)**.

Table 11.1. Passenger Classification/Restraint Guidance.

Passenger Classification	Approval Authority	Restraint	Tactical Events
Space Available	OG/CC, COMAFSOF	Seat/Seat Belt	No
Aeromedical Evacuation	OG/CC, COMAFSOF	Alt Load	No
Orientation			
Incentive Flights	See AFI 11-401	Seat/Seat Belt	Yes*
Distinguished Visitor (DV)	See AFI 11-401	Seat/Seat Belt	Yes*
Familiarization Flights	See AFI 11-401	Seat/Seat Belt	Yes*
Spouse	See AFI 11-401	Seat/Seat Belt	No

Passenger Classification	Approval Authority	Restraint	Tactical Events
Public Affairs Flights	See AFI 11-401	Seat/Seat Belt	Yes*
Space Required			
US & Foreign Military Personnel	Mission Tasking Authority	Alt Load	Yes
Additional Aircrew	PIC	Alt Load	Yes
Maintenance (MX) Personnel Supporting Deployment	Squadron CC, MC	Seat/Seat Belt	Yes
Unit Assigned/Attached personnel	Squadron CC, MC	Seat/Seat Belt	Yes
Other Military personnel, DoD civilians, and DoD contractors	OG/CC, COMAFSOF	Seat/Seat Belt	Yes
Personnel Required for 18 Flight Test Squadron (FLTS)	18 FLTS/CC	As Required	As Required
*When authorized by approving authority. **Note:** Alt Load refers to alternate restraint methods such as a personal restraining device.			

11.4. Low-Level Operations.

11.4.1. Day VMC/Night VMC with NVGs. Maintain 300 feet AGL modified contour or as specified in addendum.

11.4.2. Night VMC without NVGs. Maintain a minimum of 500 feet above the highest obstacle within 3 nm of route centerline for each route segment.

11.4.3. Low Level Pre-Briefing. It is imperative that a complete and detailed crew briefing is conducted prior to low-level flight. This briefing covers as a minimum the following items: emergency procedures including NVG malfunction, ESA and the determining obstacle, alternate airfields, combat entry point, the location of inflight warnings, and, for each leg, the course, distance, time, MSA and significant terrain or threats, and the objective area as directed by LZ/DZ sections or combat exit point.

11.4.4. Radar/Radio Altimeter: For aircraft equipped with a radar/radio altimeter, set the altitude clearance markers to 90% of the desired en route altitude except during air drops or final approach. Activation of the low-altitude warning system indicates the aircraft is too low and an immediate correction is necessary.

11.4.5. Minimum low level airspeed is best rate of climb airspeed (Vy, Vyse) with flaps up, and best angle of climb speed (Vx,Vxse, or V2) with flaps set at approach/takeoff. Crews should not operate multi-engine aircraft below VMCA at low level.

11.5. General Airdrop Procedures.

11.5.1. Positioning. Accurately positioning the aircraft at the release point is the most critical phase of the airdrop mission. Crew coordination is of the utmost importance to ensure that all warnings and checklists are completed, proper DZ alignment is maintained, and TOT is within established tolerances. For visual airdrops at night the flight crew should wear NVGs to accomplish drops on covertly marked or unmarked drop zones.

11.5.2. The PIC is responsible for computing a release point for all drops. Actual release is made by, but not limited to, the following methods:

11.5.2.1. Computed Air Release Point (CARP), High Altitude Release Point (HARP), or Launch Acceptability Region (LAR).

11.5.2.2. Ground Marked Release System (GMRS).

11.5.2.3. Jumpmaster directed. **Note:** The pilots will compare their CARP/HARP/LAR with that of the jumpmaster and resolve any significant differences prior to the drop.

11.5.2.4. Voice Initiated Release System (VIRS)

11.5.3. Aircrew Procedures. These are basic procedures used to arrive at the release point.

11.5.3.1. The pilot will brief the crew on the release method, the CARP/HARP/LAR, the expected drift, release point location, desired magnetic heading (MH), drop altitude, drop airspeed, minimum safe altitude between IP and DZ, ground hazards/terrain in the drop area, escape heading, and altitude to be flown after drop.

11.5.3.2. Ten seconds prior to the release point, the navigating pilot will call, “Ten seconds."

11.5.3.3. At the release point (or at the prebriefed point for jumpmaster directed [JMD] drops) the green light (if so equipped) will be turned on at the command of the navigating pilot or navigator. If not equipped with airdrop lights, a prebriefed signal will be used.

11.5.3.4. During the Drop:

11.5.3.4.1. Maintain the desired track, making small corrections as necessary.

11.5.3.4.2. The navigating pilot will call "Red Light" at the end of the programmed/computed time delay. If not equipped with airdrop lights, use a prebriefed signal.

11.5.3.4.3. If the LM observes any delay or malfunction of equipment, or delay of a parachutist to jump, advise the pilot.

11.5.3.5. Drop Zone Escape. After the aircraft has been reconfigured and the static lines have been retrieved/cut, the remainder of the completion of drop checklist should be completed in a timely manner so that crew duties pertaining to continued low-level are not diverted.

11.6. Visual Airdrop Procedures. As soon as the DZ is visible and identified by the pilots, they jointly confirm the release point location, lateral offset, and track required. The PF the aircraft then assumes the responsibility for maintaining the desired track.

11.7. Jumpmaster Directed (JMD) Airdrops. When JMD airdrops are utilized, the following restrictions and procedures apply:

11.7.1. Prior to takeoff, a CARP or HARP will be calculated for each airdrop. The aircrew and the jumpmaster will compare predicted release points, resolve significant differences, and agree to a planned run-in and slow-down point. The pilot, LM, and jumpmaster will coordinate interphone procedures, verbal and visual signals.

11.7.2. At completion of the slowdown, the LM will allow the jumpmaster to begin "spotting procedures". The jumpmaster may spot from the aircraft ramp/side door or a window.

11.7.3. The aircrew may turn on the "green light" once the drop zone has been positively identified and drop clearance has been obtained, but no earlier than 1 minute prior to the aircrew-jumpmaster agreed upon HARP for free fall operations, or 30 seconds prior to the agreed upon CARP for static line drops. Personnel will not exit unless the green light is illuminated. Any time exit of the jumpers becomes unsafe, the aircrew will turn on the "red light" and the LM will direct the jumpmaster to stop the remaining jumpers.

11.7.4. JMD airdrops will be accomplished in VMC. The jumpmaster's unit accepts responsibility for accuracy or injury.

11.8. Airdrop.

11.8.1. Floor Loading of Personnel. Floor loading is only authorized in support of SOF and foreign counterparts during SOF operations, exercises and training, or during bilateral training in support of SOF. Floor loading of SOF will only be employed when the mission cannot be accomplished by using standard seating configurations.

11.8.2. Ramp and Door Operations (Aircraft with Ramp and Door)/Side Door Operations:

11.8.2.1. Clearance to Open. Depending on the tactical situation, it may be desirable to open the ramp and door or side door prior to the slow-down checklist. The pilot may direct ramp and door/side door(s) opening any time after the six-minute advisory has been completed and clearance from the LM is received. After the ramp and door/side door(s) is/are open, the LM is cleared to complete the slow-down checklist. Consider aircraft position and the possibility of dropped objects when the door is opened.

11.8.2.2. Loadmaster-Jumpmaster Control. During the slow-down portion of the airdrop, the LM will relinquish control of the door/ramp to the jumpmaster. The LM will then take a position in such a manner as to provide maximum maneuverability for jumpmasters and safety personnel to perform their duties. Upon seeing the red jump lights illuminate, the LM will notify the jumpmaster or safety personnel of the red light condition. The LM will take no further action to stop any of the remaining parachutists. The LM will count (if possible) any parachutists that exit the aircraft after the red light has illuminated. Control of the door will revert back to the LM after all parachutists have exited or remaining parachutists have been stopped by the jumpmaster or safety and cleared from the door area. For multiple passes (i.e., racetracks), after assuming control of the door/ramp from the jumpmaster, the LM will maintain control of the door/ramp until completion of the slow-down checklist.

11.8.3. Multiple Passes (Racetracks). Multiple passes will not be made unless directed or previously agreed upon by all units involved. In the event multiple passes are performed,

regardless of the time interval involved, all airdrop checklists will be accomplished. In the event like drops are accomplished during multiple passes, the checklist may be initiated at a point commensurate with the available time and type of drop, at the discretion of the PIC.

11.8.4. Static Line Retrieval. To facilitate manual static line retrieval, airspeed will not be increased above 150 knots indicated air speed (KIAS) until static lines are retrieved. Loadmasters should allow static lines to wrap together before retrieving static lines. The LM will retrieve static lines as soon as possible after parachutist and/or para-bundle exit is completed or exiting is suspended.

11.8.5. Tailgate Drops. Tailgate drops are those during which parachutists exit from the aircraft ramp. The following restrictions apply:

11.8.5.1. Retrieve static lines and deployment bags prior to each additional pass to prevent fouling.

11.8.6. Combination Drops. Combination drops are those during which parachutists exit from the aircraft ramp and door or side door(s) after the gravity release of an airdrop load. The drop altitude will be determined by the item requiring the highest drop altitude.

11.8.6.1. Restrictions. Static lines will be retrieved after each pass to minimize fouling risk. For gravity ejected loads, for additional passes, close the cargo ramp and door or side door, if required, and rig IAW appropriate rigging procedures.

11.8.6.2. Procedures. In addition to the equipment CARP, the aircrew will compute a personnel CARP down track from the equipment release point using the computed exit time for the equipment drop as the time interval between the equipment and personnel CARP. Use the same KIAS and altitude as for the equipment for this computation. If the computed point of impact falls within 150 yards of any boundary of the drop zone, inform the jumpmaster.

11.8.7. Parachute Ballistics. Crews will not make airdrops using parachutes for which AFI 11-231 does not list ballistics unless the user provides approved ballistic data or K factor. The ballistics or K factor should be approved by HQ AFSOC/A3V. This does not apply to formal/user test missions where the purpose of the test is to derive ballistic data for a specific load.

11.8.8. Side Door Drops. Side door drops are those during which parachutists exit from the aircraft side door(s).

11.9. No-Drop Decisions.

11.9.1. Prior to one minute warning, when any condition exists that would make a safe drop doubtful, notify the PIC.

11.9.2. After the 1 minute warning, any crew member observing a condition that would jeopardize a safe drop will transmit "No-Drop" on the interphone. All crewmembers will acknowledge a “no drop” call. The PIC will be directive for follow-on procedures.

11.9.3. If a no-drop is called after the load restraint is removed and a racetrack is not planned, reapply the load restraint.

11.10. Airdrop Emergencies. If a malfunction occurs during an airdrop, the LM will immediately notify the pilot and take appropriate action. Appropriate emergency actions will be reviewed by the crew prior to the airdrop.

11.11. Blind Drop Zones. The drop zone is unmarked. The aircrew confirms the DZ location and determines the release point by onboard navigational equipment or visual offset points. **Note:** The chance of a successful drop decreases if equivalent moon illumination is less than 5% and/or there is little or no contrast between the DZ and the surrounding area. Plan 20 minutes additional fuel for operations involving unmarked drop zones.

11.12. Personnel Airdrop. WARNING: During personnel airdrops ensure all personnel are secured to the aircraft or have a static line connected prior to opening any doors. HALO/HAHO personnel will be configured and ready to jump.

11.12.1. Aircraft Emergency during Personnel Airdrop:

11.12.1.1. When an aircraft emergency occurs during or after the time the parachutists stand up and hookup, the following procedures will apply:

11.12.1.1.1. Under Acceptable Conditions:

11.12.1.1.1.1. Maintain an acceptable altitude and attitude for the parachutists to evacuate the aircraft. The minimum acceptable altitude is 400 feet AGL. If the jump must be made at airspeed in excess of 150 KIAS, the parachutists will be advised of the airspeed and altitude.

11.12.1.1.1.1.1. Order evacuation of the aircraft by giving the pre-briefed signals for preparation and bailout.

11.12.1.1.2. Under Unacceptable Conditions. When conditions are not acceptable for aircraft evacuation and/or drop is aborted for other reasons, the following procedures apply:

11.12.1.1.2.1. The red light will be turned "ON" (or prebriefed signal) and will remain on until all doors are closed, if applicable.

11.12.1.1.2.1.1. The pilot will advise the LM, who in turn will advise the jumpmaster to have the parachutists unhook, take their seats, and fasten their safety belts.

11.12.1.2. When an aircraft emergency occurs before the time the parachutist's hookup, the crew will notify the jumpers to fasten their seat belts and prepare for an emergency landing.

11.13. Equipment and Cargo Drop. Equipment and Cargo drops will be conducted IAW with specific AFM, POH or manufactures recommended procedures along with applicable 13 Series Technical orders. If no procedures have been established in an aircraft, aircrew should practice ground loading and planning to ensure airdrop equipment and rigging will not damage or interfere with the aircraft control surfaces. Aircrews will also plan and brief TTP’s and emergency procedure prior to flight

11.14. Door Bundle.

11.14.1. General. A7 or A21 containers weighing up to 500 pounds are referred to as door bundles and will be dropped from the aircraft using the personnel airdrop checklist. Door bundles may be dropped independently or in conjunction with personnel. When dropped with personnel, the bundle will be the first object to exit the aircraft **(T-3)**.

11.14.1.1. When followed by parachutist, door bundles dropped off the ramp and door or side door will be equipped with breakaway static lines IAW TO 13C7-1-11, *Airdrop of Supplies and Equipment Rigging Containers*, or with parachutes packed in T-10 bags.

11.14.1.2. Bundles that exceed 500 pounds will be airdropped using procedures IAW the aircraft specific addendum **(T-3)**.

11.14.2. Release Point. When door bundles are dropped with personnel, compute the CARP for the first paratrooper exiting after the bundle. Compute an additional CARP for the door bundle to ensure that it will impact within the DZ boundaries. Release the bundle at the personnel CARP, followed by the parachutists when the door is clear. When a door bundle is the only object being dropped, base the release on the CARP for the bundle.

11.15. Container Delivery System (CDS). CDS is a method of airdropping supplies using gravity to extract the load from the aircraft. The type containers used are A-22, double A-22 or Combat Rubber Raiding Craft (CRRC). The bundles may be dropped with or without parachutists. When performing combination drops, the parachutists will exit after the container. For specific CDS/CRRC procedures refer to the aircraft specific attachment.

11.16. Free-Fall Delivery System. The delivery of certain types of supplies, such as bulk food products or clothing, can be accomplished without the use of parachutes. For free drop, wind drift need not be considered. Use the appropriate personnel airdrop checklist.

11.16.1. Drop Altitude. Normally, free-drop is accomplished at much lower altitudes than those required for paradrops. When possible, free-drops will be made at 200 feet AGL or less, but not below 50 feet AGL.

11.16.2. Drop Zone Size. The trajectory of the items being dropped will determine the DZ size requirements. As a rule, the DZ length required equals the altitude of the aircraft over the release point plus a safety margin of 100 feet added to each end. Applying this rule, when dropping from 200 feet AGL, the required length will be 200 feet (altitude) plus 200 feet (safety margin) or 400 feet total.

11.17. Standard Airdrop Training Bundle (SATB).

11.17.1. General. The 15-pound training bundle is designated the standard airdrop training bundle and may be dropped to simulate personnel or equipment airdrops. Conduct SATB missions at the altitude and airspeed specified for the type of drop being simulated and use the applicable tactical airdrop checklist. Training bundles will be assembled and have an identification tag attached IAW TO13C7-1-11, Appendix D. Training bundles will not be rigged with a breakaway static line.

11.17.2. Emergency Procedures: If a training bundle is outside the aircraft and fails to separate, make no attempt to retrieve it. Cut the bundle loose over the pre-briefed salvo area or DZ on clearance from the PIC.

11.18. High-Altitude Mission Requirements. Airdrops conducted above 3,000 feet AGL are considered to be high-altitude drops. Consult AFI 11-409, *High Altitude Airdrop Mission Support Program*, and AFI 11-202V3 for additional requirements.

11.18.1. Emergency Procedures. If any person experiences decompression sickness or unusual pain, the pilot will:

11.18.2. Abort the mission.

11.18.3. Begin a descent. The type and degree of sickness or pain will determine the descent.

11.18.4. Proceed to the nearest base at which qualified medical assistance is available.

11.18.5. Advise the control tower of the emergency and request a doctor and an ambulance to meet the aircraft.

11.19. High-Altitude Personnel Drop (HALO/HAHO) Procedures. A HARP solution or LAR will be computed for all high-altitude personnel drops unless specific mission directives dictate otherwise.

11.19.1. Drop Configuration will be IAW with the aircraft-specific addendum.

11.19.2. Communications and Signals:

11.19.2.1. Hand Signals. The pilot or LM will coordinate the following hand signals with the jumpmaster:

11.19.2.1.1. Time warnings (20, 10, 6, 3, and 1 minute) will be given to the parachutists by the LM pointing at a watch and indicating with fingers the correct warning.

11.19.2.1.2. Wind velocity on the DZ will be given an open hand, palm up, moved horizontally and blowing into it and indicating with upturned fingers the speed of the wind.

11.19.2.1.3. Passing the forefinger across the throat indicates a no-drop.

11.19.2.2. Written Messages. The LM will carry pencil and paper and write out messages that cannot be passed by hand signals. Messages for the pilot from the parachutists will be written.

11.19.3. Briefing. The following items will be added to the pilot-jumpmaster briefing:

11.19.3.1. Weather.

11.19.3.2. Emergency descent procedures and time to descend to 10,000 feet MSL.

11.19.3.3. HARP/LAR and prominent terrain features.

11.19.3.4. DZ markings.

11.19.3.5. Time at which all mission personnel will commence pre-breathing.

11.19.3.6. Location and duration of the green light.

11.20. Joint Airdrop Inspection Records. DD Form 1748, *Joint Airdrop Inspection Record*, will be accomplished IAW AFJI 13-210, *Joint Airdrop Inspection Records, Malfunction Investigation, and Activity Reporting*, prior to all equipment airdrops. Retention and disposition of

the form will be IAW AFJI 13-210, as supplemented. **Exception:** Door bundles and free drop bundles.

11.21. Identification of Airdrop Items. Immediate identification of aerial delivery items that land off the drop zone in unsecured areas may be necessary. The following procedures will aid in denying the enemy usable items and in minimizing the risk of loss of life over items that may be expendable. PICs will be familiar with airdrop contents and the order in which it leaves the aircraft for radio transmission to the combat control team, if requested. Identify supplies or equipment by the following class numbering system:

11.21.1. Class I - Food and daily expendables.

11.21.2. Class II - Hardware, guns.

11.21.3. Class III - POL.

11.21.4. Class IV - Fortification materials (sandbags, etc.).

11.21.5. Class V - Ammunition (include the type):

11.21.5.1. Type "A" - Small arms.

11.21.5.2. Type "B" - Mortars.

11.21.5.3. Type "C" - Artillery.

11.21.6. Class VI - Civil relief supplies.

11.22. Protective Headgear.

11.22.1. The LM and any other personnel required to be mobile in the cargo compartment will wear helmets during aerial deliveries utilizing the aircraft overhead anchor cable. The flight helmet will be worn with the chinstrap fastened from the first warning until the aerial delivery is complete and the cargo compartment is secure. Lower helmet visors if possible. **WARNING**: LM will not position themselves directly under the anchor cable supports during personnel/equipment airdrops requiring the use of the anchor cable.

11.22.2. Personnel in the cargo compartment not actively participating in the aerial delivery are not required to wear helmets. However, they will remain seated with seat belts fastened from the first warning until the aerial delivery is complete and the cargo compartment is secure.

11.23. Safety Device.

11.23.1. Crew members will wear a restraint device when performing duties near an open exit inflight. Fit the restraint device and adjust the lifeline prior to flight. Connect the hook to a point that will preclude the wearer exiting the aircraft. The strap will not be connected to an anchor cable that has static lines attached to it for an airdrop.

11.23.2. Other personnel required to be mobile in the cargo compartment, as determined by the PIC, must have their own restraint device or parachute **(T-3)**.

Chapter 12

ADAPTIVE INTELLIGENCE SURVEILLANCE AND RECONNAISSANCE

12.1. General. Intelligence, Surveillance and Reconnaissance for the CAA encompasses the full spectrum, from Pattern of Life (POL) all the way to support to Direct Action (DA). The adaptive nature of the CAA applies to ISR in the sense that even as the CAA trains in garrison to the standards and practices of a US/AFSOC style Joint Task Force (JTF), CAA Instructors can pair and tailor the specifics of ISR to whatever Partner Nation (PN) they are training for or with.

12.2. Aircrew Qualification. Each person assigned as a primary crewmember must be qualified or in training for qualification in that crew position, mission, and aircraft.

12.3. Crew Complement. The crew complement for operations is specified in the Pilot's Operation Handbook (POH) of the respective aircraft for which ISR training or missions will be conducted in. For CAA mission training in garrison, Pilots and WSO/CSO/SO, should train to maximum extent possible to be the only qualified USAF member within the aircraft, much like PN operations are conducted.

Table 12.1. Crew Complement.

Mission	Pilots	WSO/CSO/SO	Notes
Engine Ground Run			
Ferry Flight	1	(1)	1, 2
Functional Check Flight (FCF)	2		3
Qualification Instrument	2		4
Qualification Mission	1	1	4, 5

NOTES:

1. Pilots may ferry aircraft with a WSO/CSO/SO onboard as qualified crewmembers and log mission events as possible.

2. If a WSO/CSO is onboard a ferry flight, they may occupy the right seat during takeoff, approach, and landing and provide support to those areas of flight.

3. Crewmembers non-current in mission events may still conduct FCF operations

4. CAA crews may utilize the current 492 SOG/919 SOG MEP letter to enhance training and fly with a non-current or non-qualified person in the Pilot right seat or Mission Sensor Operator (MSO) station.

5. Minimum crew is 1 pilot and 1 WSO/CSO/SO. Typical training missions are 2 pilots and 1 WSO/CSO/SO.

12.3.1. Additional Crewmembers (ACM). An ACM is an aircrew member assigned in addition to the normal aircrew complement required for a mission or training. See AFI 11-401_AFSOCSUP.

12.3.2. Logging of Flying Time. Log flying time IAW AFI 11-401_AFSOCSUP.

12.4. Planning Responsibilities. Crews will review all mission-specific products and coordinate with the Mission Rehearsal Team or other players. The primary instructors (IP/WSO/CSO/CO) will be responsible for providing the scenario.

12.4.1. Standard Briefing Practices. In addition to standard briefing products, the crew will brief the Emergency Procedure (EP) of the Day, Tactical Topic/Threat (TTT) of the Day, and the Mission System (MS) of the day. Reference current CAA IFG for these specific topics of the day.

12.5. Combat Entry/Exit Criteria.

12.5.1. Utilize the "FENCE" acronym to help aircrew prepare the aircraft prior to entry into and exit from combat operations. Modify these techniques as situation and aircraft require. Normal aircraft and mission checklists will be used for all operations and it is incumbent on the aircrew to ensure that all checklist items appropriate to the mission are accomplished and safety is maximized.

12.5.1.1. F = Fuel, E = Engine/Electrics, N = Navigation, C = Communications, E-Emitters/Lasers/Weapons

12.6. Crew Debriefing/Post Mission Actions.

12.6.1. Training Missions. The PIC/ICSO will conduct the debriefing session IAW the Inflight Guide (IFG) and complete the appropriate documentation. The PIC will ensure all applicable information is passed to controlling agencies.

12.6.1.1. Storyboards. If training missions supported a joint user, exercise, OAD spin-up or other non-standard event, the aircrew will create a storyboard using the approved template and submit it to the Squadron (6 SOS/711 SOS) CC, DO or MC with the post-mission products.

12.6.1.2. The aircrew will utilize stills and images captured from either the mission systems or other electronic devices.

12.6.1.2.1. Appropriate product classification and medium transmission will be utilized per situation.

12.6.2. Combat Operations. Each aircrew participating in operations under actual combat conditions will participate in an intelligence and mission debriefing session.

12.6.2.1. A post-mission storyboard and roll up will be created IAW paragraph **12.6.1.1**.

Chapter 13

ADAPTIVE PRECISION STRIKE

13.1. General. AFI 11-214 contains A/G procedures and restrictions applicable to all aircraft. This chapter contains procedures and restrictions relevant to CAA adaptive precision strike operations.

13.1.1. IAW AFI 11-214, Chapter 5 restrictions on final switch configurations when expending A/G ordnance, "final switch configuration" is defined as Master Arm "ARM".

13.1.2. Especially in the employment of live and/or heavyweight inert ordnance on training ranges, aircrew will ensure they are completely familiar with range restrictions regarding Master Arm usage as well as run-in heading adherence and verification or confirmation of targeting (if applicable).

13.1.2.1. For multiple passes, unless otherwise stipulated in range restrictions, do not Master Arm hot until aircraft is in such a position that any unintentional release will be contained within the range boundaries **(T-2)**.

13.1.2.2. If in doubt or target situation awareness is lost, priority shall be given to ensuring the Master Arm is "SAFE" to mitigate the change of an inadvertent/unintentional release **(T-2)**.

13.1.3. General Procedures. AFI 13-212 is the parent instruction for all AF ranges. Wings/Groups will publish range procedures for frequently used weapons ranges IAW AFI 13-212V1, or other applicable local guidance.

13.1.4. If not using an AF range, aircrew will use the component range procedures **(T-2)**.

13.2. Air-to-Surface Training.

13.2.1. Crew coordinate the type of attack to be flown before beginning the appropriate weapon delivery checklist. Include the weapon, station, height above target (HAT) at release (if applicable), aircraft altitude in MSL at release (if applicable), laser employment (delayed or continuous), and the type of laser designation leg post release **(T-3)**.

13.2.2. Begin DVR recording upon check-in with the supported ground party, or FENCE-IN without a ground party, if available. If DVR storage is limited, at a minimum, record the communications authorizing weapon employment, such as a 9-Line or Call for Fire briefing, and the final LRF taken prior to beginning the appropriate weapon delivery checklist. Begin recording no later than the start of the weapon delivery checklist **(T-3)**.

13.2.3. Simulated Operations with Live/Inert Weapons Loaded. On sorties accomplishing both live/inert and simulated weapons employment, the AC will notify the crew whether to accomplish live or simulated actions during the target briefing **(T-2)**.

13.2.4. Simulated Attacks against Off-Range or Manned Targets with Live/Inert Weapons Loaded. In addition to AFI 11-214, Chapter 5, restrictions, the following guidance applies.

13.2.4.1. "Simulated attacks" are defined as the combined use of Master Arm "ARM", and pickle button or trigger actuation.

13.2.4.2. Do not select Master Arm "ARM" **(T-2)**.

13.2.4.3. Do not select stations loaded with expendable ordnance against off-range or manned targets **(T-2)**.

13.2.4.4. The pickle button may be pressed to simulate release if the weapons software is in a mode allowing a simulated release/launch without any release/launch signal being sent to the weapon IAW applicable weapons T.O. or manual **(T-2)**.

13.3. Live-Ordinance Operations. WARNING: Any crew member detecting an unsafe condition during live ordinance operations will call "ABORT." Weapons employment will not resume until the unsafe condition is corrected.

13.3.1. Night and IMC Surface Attack Range Procedures. For night and IMC range weapons deliveries, the weather must allow the Range Control Officer (RCO) (for a class A range), or a flight member or range personnel (for a class B or C range) to clear the target area and spot or score the ordnance impact **(T-2)**.

13.3.2. Armament System Malfunctions. General. Aircrew will not attempt to expend ordnance with a known weapons release malfunction **(T-2)**.

13.3.2.1. Inadvertent Release or Firing (i.e. not due to aircrew error).

13.3.2.2. Note switch positions at the time of inadvertent release or firing and provide to armament and safety personnel. Record the impact point if known.

13.3.2.3. Safe the armament switches and do not attempt further release or firing in any mode. Treat remaining ordnance as hung and follow hung ordnance procedures during RTB.

13.3.2.4. If remaining stores present a recovery hazard, (and if the aircraft is suitably equipped/ capable) jettison them in a suitable area on a single pass, if practical **(T-2)**.

13.3.3. Failure to Release, Failure to Fire, or Hung Ordnance. Note weapon control switch settings. Maintain flight path IAW appropriate range restrictions. If ordnance delivery failed with proper setup, proceed as follows.

13.3.3.1. Hung Ordnance and Weapons Malfunction Recovery.

13.3.3.1.1. If practical, visually inspect the aircraft for damage. The sensor system, targeting pod and visual scans will be used to examine the aircraft, pylons and weapons **(T-3)**.

13.3.3.1.2. Declare an emergency when carrying hung live or malfunctioning ordnance.

13.3.3.1.3. Declaration of an emergency for inert ordnance IAW local directives and aircrew discretion. Consider the pylon design when determining risk of inadvertent release of the hung bomb.

13.3.3.1.4. Avoid pointing rocket or missiles in the direction of populated areas. Minimize overflight of populated areas when carrying live/inert weapons. This does not apply to CATM.

13.3.3.1.5. Avoid excessive maneuvering and pattern work with any hung ordinance or any weapon launch malfunction. Land from a straight-in approach unless it is deemed tactically unsound by the PIC.

13.3.3.1.6. Notify munitions/weapons maintenance entities prior to landing with any hung ordinance/weapons launch malfunction if possible.

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Director of Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Prescribed Forms

None

Adopted Forms

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AF Form 70, *Pilots Flight Plan and Flight Log*

AF Form 315, *USAF AVFuels Invoice or Air Card*

AF Form 523, *USAF Authorization to Bear Firearms*

AF Form 847, *Recommendation of Change of Publication*

AF Form 1297, *Temporary Issue Receipt*

AF Form 4116, *Computer Flight Plan*

AF Form 4327A, *Crew Flight (FA) Authorization*

AFSOC Form 97, *Aircraft Incident Worksheet*

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*

CBP 7507, *General Declaration (Outward/Inward)*

DD Form 96, *Passenger Manifest*

DD Form 175, *Flight Plan, Military*

DD Form 1384, *Transportation Control and Movement Document*

DD Form 1385, *Cargo Manifest*

DD Form 1387-2, *Special Handling Data/Certification*

DD Form 1748, *Joint Airdrop Inspection Record*

DD Form 1854, *US Customs Accompanied Baggage Declaration*

DD Form 2131, *Passenger Manifest*

DD Form 2133, *Joint Airlift Inspection Record*

DD Form 365-4, *Weight and Balance Clearance Form F*

I-94, *Immigration Form, Immigration and Naturalization Service Arrival/Departure Record*

Abbreviations and Acronyms

A3V—Headquarters Standardization/Evaluation Division

AC—Aircraft Commander

ACM—Additional Crew Member

ADIZ—Air Defense Identification Zone

ADS—Aerial Delivery System

AF—Air Force

AFD—Airfield Facility Directory

AFE—Aircrew Flight Equipment

AFI—Air Force Instruction

AFJMAN—Air Force Joint Manual

AFM—Aircraft Flight Manual

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFSC—Air Force Specialty Code

AFSOC—Air Force Special Operations Command

AFSOCI—AFSOC Instruction

AFSOC/SG—Air Force Special Operations Surgeon General

AGL—Above Ground level

AIM—Aeronautical Information Manual

AMC—Air Mobility Command

AMP—Airfield Marking Patterns

ANG—Air National Guard

AOP—Aerospace and Operational Physiologist

ALCE—Airlift Control Element

AOC—Air Operations Center

ARMS—Aircrew Resource Management System

ARTCC—Air Route Traffic Control Center

ATC—Air Traffic Control

AvFID—Aviation Foreign Internal Defense

AWL—Above Water Level

AZAR—Assault Zone Availability Report

C2—Command and Control

CAA—Combat Aviation Advisor

CARP—Computed Air Release Point

CCC—Command and Control Center

CCT—Combat Control Team

CDS—Container Delivery System

CEOI—Communications Element Operating Instructions

CEP—Combat Entry Point

CARP—Computed Air Release Point

CDS—Container Delivery System

CFP—Computer Flight Plan

CFR—Crash Fire Rescue

CHUM—Chart Update Manual

CL—Checklist

COMAFSOF—Commander Air Force Special Operations Forces

COMSEC—Communications Security

CONUS—Continental United States

CRRC—Combat Rubber Raiding Craft

CVR—Cockpit Voice Recorder

DH—Decision Height

DME—Distance Measuring Equipment

DOD—Department of Defense

DODD—DOD Directive

DOT—Department of Transportation

DR—Dead Reckoning

DUATS—Direct User Access Terminal System

DZ—Drop Zone

DZCO—Drop Zone Control Officer

DV—Distinguished Visitors

EFAS—En route Flight Advisory Service

EGT—Exhaust Gas Temperature

EMI—Electromagnetic Interference

EPs—Emergency Procedures

ERO—Engines Running Onload/Offload

ESA—Emergency Safe Altitude

ETA—Estimated Time Arrival

ETE—Estimated Time En route

ETD—Estimated Time of Departure

ETP—Equal Time Point

F—Fahrenheit

FA—Flight Authorization

FAA—Federal Aviation Administration

FAR/AIM—Federal Aviation Regulations and Aeronautical Information Manual

FARP—Forward Area Refueling Point

FBO—Fixed Base Operator

FCIF—Flight Crew Information File

FDP—Flight Duty Period

FE—Flight Engineer

FIH—Flight Information Handbook

FIR—Flight Information Regions

FL—Flight Level

FLIP—Flight Information Publications

FMS—Flight Management System

FSS—Flight Service Station

GMRS—Ground Marked Release System

GNC—Global Navigation Chart

GPS—Global Positioning System

HAA—Height Above Airfield

HAHO—High-altitude High-opening

HALO—High-altitude Low-opening

HARP—High-altitude Release Point

HAT—Height Above Touchdown

HQ—Headquarters

IAW—In Accordance With

ICAO—International Civil Aviation Organization

IFF/SIF—Identification Friend or Foe/Selective Identification Feature

IFR—Instrument Flight Rules

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

INFIL/EXFIL—Infiltration/Exfiltration

INS—Internal Navigation System

IP—Initial Point or Instructor Pilot

IR—Infrared

ITT—Inter-Turbine Temperature

JMD—Jumpmaster Directed

JNC—Jet Navigation Chart

JOG—Joint Operations Graph

JSSG—Joint Service Specification Guide

KIAS—Knots Indicated Air Speed

KM—Kilometers

LCADS—Low Cost Aerial Delivery System

LCLA—Low Cost Low Altitude

LM—Loadmaster

LV—Low Velocity

LZ—Landing Zone

LZSO—Landing Zone Safety Officer

LSAF—Last Suitable Airfield

MAJCOM—Major Command

MCTOW—Maximum Certificated Takeoff Weight

MDA—Minimum Descent Altitude

MDS—Mission Design Series

MEL—Minimum Equipment List M

MFF—Military Free Fall

MH—Magnetic Heading

MILSTD—Military Standard

MSA—Minimum Safe Altitude

MSL—Mean Sea Level

NC—Noncurrent

NEW—Net Explosive Weight

NM—Nautical Mile

NOAA—National Oceanic and Atmospheric Administration

NOHD—Nominal Ocular Hazard Distance

NVG—Night Vision Goggle

OAD—Operational Aviation Detachment

OG/CC—Operations Group Commander

ONC—Operation Navigation Chart

OPCON—Operational Control

OPORD—Operation Order

OPR—Office of Primary Responsibility

PFPS—Portable Flight Planning System

PIC—Pilot In Command

PI—Point of Impact

PL—Protection Level

PMSV—Pilot Meteorological Service

POH—Pilots Operating Handbook

POK—Passenger Oxygen Kit

POL—Petroleum Oil Lubricants

PSP—Pierced Steel Plank

PT—Physiology Technician

RAIM—Receiver Autonomous Integrity Monitoring

RDS—Records Disposition Schedule

RNAV—Area Navigation

RON—Remain Overnight

RPM—Revolutions per Minute

RVR—Runway Visual Range

SATB—Standard Airdrop Training Bundle

SAR—Search and Rescue

SF—Special Forces

SO—Safety Observer

SOF—Special Operations Forces

SPINS—Special Instructions

SRT—Security Response Team

Stan/Eval—Standardization and Evaluation

STOL—Short Takeoff and Landing

STS—Special Tactics Squadron

TALO—Tactical Air Liaison Officer

TAS—True Air Speed

TCMD—Transportation Control and Movement Document

TCN—Transportation Control Number

TIT—Turbine Inlet Temperature

TOA—Time of Arrival

TOLD—Takeoff and Landing Data

TOT—Time Over Target

TO—Technical Order

TPC—Tactical Pilotage Chart

UNQ—Unqualified

UTM—Universal Transverse Mercator

USAF—United States Air Force

USAFSAM—USAF School of Aerospace Medicine

USSOCOM—United States Special Operations Command

USTRANSCOM—United States Transportation Command

V1—Takeoff Decision Speed

V2—Takeoff Safety Speed

Vco—Climb Out Speed

VFR—Visual Flight Rules

Vfto—Final Takeoff Speed

Vmcg—Ground Minimum Control Speed

Vmc—Minimum Control Speed With the Critical Engine Inoperative

Vs—Stall Speed, Clean

Vx—Best Climb Angle

Vxse—Best Climb Angle Single Engine

Vy—Best Rate of Climb Speed

Vyse—Best Rate of Climb Speed Single Engine

Vxse—Single-engine best angle of climb speed

VIRS—Voice Initiated Release System

VFR—Visual Flight Rule

VMC—Visual Meteorological Conditions

VVI—Vertical Velocity Indicator

Terms

Accelerate/Stop Distance—The distance required to accelerate from a standing start to V1, and then, assuming a failure of the critical engine, come to a full stop.

Additional Crew member (ACM)—An individual possessing valid aeronautical orders IAW AFI 11-401 who is required to perform in-flight duties and is assigned in addition to the normal aircrew complement required for a mission.

Airdrop—Aerial delivery of personnel, supplies, or equipment from an aircraft inflight.

Basic Aircraft Qualified Crew members—Crew member's qualified and current IAW AFSOCI 11-2OAD, Vol 1, Additional/Supplemental Aircraft Training, to fly the unit aircraft only on non-tactical missions.

Basic Mission Capable Crew members—An aircrew member who has satisfactorily completed mission qualification and is maintaining 50% of the applicable mission qualification currency requirements of this instruction.

Caution:—Operating procedures, techniques, and so forth, which may result in damage to equipment if not carefully followed.

Combat Control Team (CCT)—A team of AF personnel organized, trained, and equipped to establish and operate navigational or terminal guidance aids, communications, and aircraft control facilities in support of tactical operations.

Combat Entry Point (CEP)—A geographical point inbound to the objective area where the hostile environment is penetrated.

Commander Air Force Special Operations Forces (COMAFSOF)—The commander designated by COMAFSOC who is responsible for management of Special Operations Forces (SOF) within a theater, a geographic area, or for a designated operation. The COMAFSOF is responsible to the SOC/CC for management of theater assigned SOF forces and is responsible to COMAFSOC for monitoring and management of SOF forces operating within the specific area of responsibility.

Computed Air Release Point (CARP)—A computed air position at which the release of personnel, equipment, containers, or bundles is initiated to land on a specific point of impact (PI). A CARP is normally computed for all airdrops that do not have a free-fall vector other than vertical distance.

Contingency Mission—A mission operated in direct support of an operation plan, operation order, disaster, or emergency.

Deadhead Time—Duty time accrued by crew members in a passenger or additional crew member (ACM) status.

Deployment—The relocation of forces to desired areas of operation.

Deviation—Performing an action not in sequence with current procedures, directives, or instructions. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Drop Zone (DZ)—A specified area where airborne personnel, equipment, or supplies are airdropped.

Drop Zone Control Officer (DZCO)—An individual on a DZ required to monitor all airdrop operations except airdrop of Army Special Forces.

Employmen—t—The tactical use of aircraft in a desired area of operation.

Equal Time Point (ETP)—The point along a route at which an aircraft may either proceed to destination or first suitable airport, or return to departure base or last suitable airport in the same amount of time based on all engines operating.

Forward Area Refueling Point (FARP)—Hot refueling that is normally conducted at night in an austere environment with aircraft engines running.

Forward Operating Base (FOB)—An airfield or base without full support facilities used during tactical operations for an undetermined and sometimes extended period of time.

Hazardous Cargo or Materials—Explosive, toxic, caustic, nuclear, combustible, flammable, biologically infectious or poisonous materials that may directly endanger human life or property, particularly if misused, mishandled or involved in accidents.

Heavy Aircraft—For the purposes of Wake Turbulence Separation Minima, aircraft capable of takeoff weights of 255,000 pounds or more whether or not they are operating at this weight during a particular phase of flight.

High—Altitude High-Opening (HAHO)—A high-altitude airdrop in which personnel deploy their parachutes immediately on exiting the aircraft (no programmed free fall).

High—Altitude Low-Opening (HALO)—Airdrop of personnel or containers using a programmed free fall (parachutist) or a staged parachute delivery.

High—Altitude Release Point (HARP)—A computed air position at which parachutists, equipment, containers, or bundles are released to land on a specific point of impact. A HARP is computed for all HALO and HAHO drops.

High—Level—**Tactical** operations conducted at or above 3,000 feet AGL.

Initial Point (IP)—A point near drop zones, landing zones or targets over which final course alterations are made to arrive at the specified zone/target.

Joint Special Operations Task Force (JSOTF)—A task force composed of Army, Air Force, and Navy special operation assets.

Low—Level—**Tactical** operations conducted below 3,000 feet AGL.

Maximum Certificated Takeoff Weight (MCTOW)—Maximum certificated takeoff weight allowable just before brake release.

May—Indicates an acceptable or suggested means of accomplishment.

Minimum Safe Altitude (MSA)—An intermediate altitude, which will provide terrain clearance in VMC or IMC.

Minor—Did not detract from mission completion.

Mission Ready Crew members—Crew member's current and fully qualified to perform the unit mission.

Mission Sortie—A mission sortie includes pre-mission planning, (if applicable), all appropriate mission checklists for an NVG route and either and NVG airdrop or an NVG takeoff, approach and landing.

Modified Contour—Flight in reference to base altitude above the terrain with momentary deviations above and below the base altitude for terrain depressions and obstructions to permit a smooth flight profile.

Night Vision Goggles (NVG)—An electro-optical image intensifying device that detects visible and near-infrared energy, intensifies the energy, and provides a visible image for night viewing. Night vision goggles are battery operated and can be either hand-held or helmet-mounted.

Note—Operating procedures, techniques, and so forth, which are essential to emphasize.

Operational Control (OPCON)—Authority to direct accomplishment of a mission.

Overwater Flight—Any flight, which exceeds power-off gliding distance from land.

Shall—A mandatory requirement.

Should—Indicates a recommended procedure that is required if practical.

Small Aircraft—For the purposes of Wake Turbulence Separation Minima, aircraft of 41,000 pounds or less maximum certificated takeoff weight (MCTOW).

Station Time (Air Force)—A specified time at which aircrew, passengers, and material are to be in the aircraft and prepared for flight. Passengers will be seated and loads tied down. Aircrews will have completed briefing and aircraft preflight inspection prior to station time. Normally, station time will be 30 minutes prior to takeoff time.

Station Time (Airborne)—A specified time when parachutists will be seated in the aircraft with seat belts fastened. This time normally will be 5 minutes prior to Air Force station time.

Time Over Target (TOT)—The actual time an aircraft is at a geographic point or area carrying out an assigned mission.

Unilateral Air Force Training—AFSOC Aircrew training conducted to achieve and maintain mission ready or mission capable status. Types of missions include PIC upgrade training, standardization and evaluation, and continuation training.

Warning—Operating procedures, techniques, and so forth, which may result in personal injury or loss of life if not carefully followed.

Will—A mandatory requirement.