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SECRETARY OF THE AIR FORCE

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Flying Operations

E-8 OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This volume implements policy guidance in AFPD 11-2, *Aircraft Rules and Procedure*s; AFPD 11-4, *Aviation Servic*e; and AFI 11-202V3, *General Flight Rule*s. It provides the basis for worldwide employment of the E-8 Joint Surveillance Target Attack Radar System. This volume does not apply to the Air Force Reserve Command. All aircrews will follow this volume which prescribes standard operating procedures and restrictions. Complementary references are included. Commanders must ensure that individuals are fully qualified according to all applicable directives prior to being used as combat mission ready/basic mission capable crewmembers. Commanders will provide aircrews with sufficient planning factors to ensure mission accomplishment. Flying safety will not be compromised. Issue this volume to E-8 aircrew members in accordance with local procedures. MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ AFFSA/XOF, through HQ ACC/DOYA, for approval prior to publication IAW AFPD 11-2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ AFFSA/XOF, HQ ACC/DOYA, and the user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms direct reporting unit (DRU) and field operating agency (FOA), as used in this paragraph, refer only to those units that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360V1, *Publications Management Progra*m. Maintain and dispose of all records created as a result of processes prescribed by this instruction IAW AFMAN 37-139, *Records Disposition Schedule.*

SUMMARY OF REVISIONS

This revision incorporates Interim Change (IC) 2003-1. This Interim Change (IC) updates **Paragraph 3.4.1.1.** minimum crew rest to apply to deployment/redeployment missions only. Paragraph **3.9.** Flying Clothing added gloves to taxi and ERCC procedures. **Paragraph 4.3.8. Multiple Full Stop Landings** incorporates ACC/DO brake energy waiver from 10 million ft-lbs to 40 million ft-lbs. **4.3.10. Aircraft Category** added. First Pilot (FP) restrictions were added to **paragraphs 4.4.2.2.** and **4.7.1.**. **Paragraph**

4.5.4. through 4.5.8. adds **RNP 10/BRNAV procedures**. **Paragraphs 4.5.9. through 4.5.12.** add **RVSM procedures**. **Table 4.1.** is replaced, incorporating guidance for AC touch and go's, copilot AR, FP restrictions, and removing crosswind restrictions from SEFTOCs and low approaches. **Paragraph 4.12. Formation Restrictions** is reworded for clarity. A "|" indicates revised material since the last edition. The entire text of the IC is at the last attachment.

Chapter 1

INTRODUCTION

1.1. Scope. This volume outlines the procedures applicable to the safe operation of the E-8. With the complementary references, this volume prescribes standard operational procedures for all E-8 aircrews and all management levels concerned with operation of the E-8. It is both a compilation of information from aircraft flight manuals, flight information publications (FLIP), and Air Force directives, as well as an original source document for many areas. Basic source directives have precedence in the case of any conflicts, revisions, and matters of interpretation.

1.2. Interfly . Interfly is the exchange and/or substitution of aircrew members and/or aircraft between units to accomplish the flying missions. OG/CC may authorize the interfly of assigned aircrew and/or aircraft. Normally, interfly should be limited to specific operations, exercises, training or special circumstances, but may be used to relieve short-term manpower shortfalls. Procedures and waiver authority in this volume will be determined by the organization issuing the mission flight orders (IAW AFI 11-401, *Flight Management*).

1.3. Aircrew Responsibility. This volume, in conjunction with other governing directives, prescribes procedures for operating E-8 aircraft under most circumstances. It is not a substitute for sound judgment. Procedures not specifically addressed may be accomplished if they enhance safe and effective mission accomplishment.

1.4. Deviations. Deviations from these procedures require specific approval of the MAJCOM/DO or as indicated in this volume except when an in-flight emergency, safety of flight, or the protection of lives dictate otherwise.

1.4.1. When beyond C2 communications capability and it is necessary to protect the crew or aircraft from a situation not covered by this AFI, the aircraft commander has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions without waiver through channels to MAJCOM OPR and OCR.

1.5. Waivers. Unless specifically noted otherwise in the appropriate section, waiver authority for requirements of this instruction is HQ ACC/DO

1.5.1. Submit waiver requests through channels to HQ ACC/DOY. HQ ACC/DOYA will coordinate all waiver requests with HQ ACC/DOG. All waivers from HQ ACC/DO will include ANG/XOO as information addressees.

1.5.2. Waivers issued by other than HQ ACC/DO will include HQ ACC/DO, HQ ACC/DOY, HQ ACC/DOG and ANG/XOO as information addressees.

1.6. Instruction Changes. Submit recommendations for change to this volume on an AF Form 847, **Recommendation for Change of Publication**, through channels, to HQ ACC/DOYA. HQ USAF/XO will approve all changes to this instruction, except as specified herein, unless an aircraft emergency or operational necessity dictates exception.

1.7. Abbreviations, Acronyms, and Terms. See **Attachment 1**.

Chapter 2

MISSION PLANNING

2.1. Mission Development/Planning. The squadron (SQ) DO or Detachment Commander (DETCO), if applicable, will actively direct the execution of the units flying schedule. The DO will ensure that all operations personnel provide crews with the requisite support to plan and execute mission. The SQ/DO will ensure crews/mission planners have no barriers to mission planning and ensure that every mission is thoroughly planned, briefed, executed, and debriefed.

2.1.1. **Scheduling** . Peacetime execution of the squadron's flying schedule shall focus on accomplishment of AFI 11-2E-8V1, *E-8 Aircrew Training,* currency, Ready Aircrew Program (RAP) requirements and evaluations.

2.1.2. **Mission Planning.** The SQ/DO will normally choose from three planning profiles when directing the flying operation: mission plan/fly, same day mission plan/fly, and show and go.

2.1.2.1. Mission Plan/Fly. Mission planning is held the duty day prior to execution.

2.1.2.2. Same Day Mission Planning. The preferred profile for pilot proficiency sorties (P-sorties).

2.1.2.3. Show and Go. Normally, show and go profiles will not be used for initial qualification training. Show and go profile missions are planned by a Mission Planning Team (MPT).

2.1.2.3.1. Mission planning team (MPT)/minimum mission planning crewmembers (MMPC). The MPT/MMPC work directly for the DO who will determine their composition. The MPT/MMPC is normally composed of nine aircrew: aircraft commander (AC), navigator (NAV/DSO), flight engineer (FE), mission crew commander (MCC), senior director (SD), deputy mission crew commander (DMCC) or airborne target surveillance supervisor (ATSS), air intelligence officer (AIO) or air intelligence technician (AIT), communication system technician (CST), and airborne mission system specialist (AMSS).

2.1.2.3.2. All MPT members must be qualified in their crew positions but may be on DNIF status.

2.1.2.4. The MCC has overall responsibility for mission crew mission planning activities.

2.2. Navigational Charts.

2.2.1. Navigational charts will be annotated to reflect:

2.2.1.1. Special use airspace, to include restricted and warning areas, within the altitude structure and within 50 nautical miles (NM) of the planned route of flight. Those portions of the route that are conducted on established airways by reference to FLIP enroute charts and pilot's radio navigation instruments need not be annotated.

2.2.1.2. Emergency airfields sufficient to cover the route of flight.

2.2.1.3. High terrain within 50 NM of planned route of flight and 25 NM of departure and arrival base.

2.2.1.4. Minimum safe altitude for the entire route of flight.

2.2.2. Navigational charts will be at the navigator's and pilot's station.

2.2.3. The use of FLIP Enroute charts will satisfy the chart requirement for pilot proficiency sorties.

2.3. Mission Planning Briefings. Units will outline detailed mission planning guides containing the standard briefing items in **Chapter 6** of this volume.

2.3.1. **Mission Planning Briefing** . (Not required for Show and Go) The AC/MCC will brief applicable information.

2.3.2. **Mission Summary Briefing** . The AC/MCC will ensure all crewmembers flying the sortie are briefed applicable information.

2.3.2.1. The mission will be rebriefed when the time interval from the summary briefing to the crew report time exceeds 72 hours. The 72-hour rebrief will cover applicable summary briefing items.

2.3.3. **Step Briefing** . All crewmembers flying the mission will attend unless excused by AC/MCC. Normally conducted when mission summary is briefed the duty day prior to sortie.

2.3.4. **Step/Summary Briefing** . Combined Step and Mission Summary briefing. This satisfies the Mission Summary and Step briefing requirement. Normally conducted on the day of the sortie.

2.3.4.1. FE, CSTs, and AMSSs normally will step directly to the aircraft after the AC, or designated representative, brief them on applicable information prior to the formal step/ summary brief.

2.3.5. **Mission Debrief** .

2.3.5.1. The AC/MCC will conduct a mission debrief, as soon as practical, with the entire crew present, unless excused by AC/MCC.

2.3.5.2. The maintenance debriefing will be conducted as soon as practical after engine shutdown. Attendance to maintenance debriefed is directed by the AC, normally the AC, FE, MCC, AMSS, CST and any crewmember making a AFTO 781, **ARMS Aircraft/Mission Flight Data Document,** write-up will attend.

2.4. Crew Report Times. Crew report times will allow sufficient time to accomplish all pre-mission activities. Units will develop and publish a standard mission timeline that take crew from report time and through an on-time takeoff.

2.4.1. For pilot proficiency sorties that are planned and flown on the same day, normally a 3-hour show time will be used to accomplish mission planning and pre-takeoff duties.

Chapter 3

AIRCREW OPERATING PROCEDURES

3.1. General. An aircraft commander is designated for all flights on the flight authorizations. Aircraft commanders are:

3.1.1. Responsible for the safe accomplishment of the mission.

3.1.2. Vested with the authority necessary to manage crew resources and accomplish the mission.

3.1.3. Final mission authority and will make decisions not specifically assigned to higher authority.

3.1.4. Final authority for requesting or accepting any waivers affecting the crew or mission.

3.1.5. Responsible for ensuring that any portion of the flight affecting the accomplishment of the E-8 mission will be coordinated with the MCC.

3.2. Minimum Crew Manning. Minimum crew is specified as a qualified AC, CP, and FE. An instructor pilot (IP) with an unqualified pilot (UP), enrolled in a formal course of training, satisfies the two-pilot requirement.

3.2.1. **Mission Systems Operation Inflight** . The minimum crew required to initialize and operate the mission system is a NAV/DSO, MCC, SMO, 2xAMSSs, and 2xCSTs. The OG/CC is the waiver authority for this requirement.

3.2.2. **P-Sortie Manning.** The minimum crew for a P-sortie is an AC, CP, and FE. An IP with a UP enrolled in a formal course of training satisfies the two-pilot requirement.

3.2.3. **Tailored Crews** . Crews may be tailored at the discretion of the SQ/DO, or DETCO, to meet mission tasking. The tailored crews will meet the minimums prescribed in this section.

3.3. Aircrew Duty Period/Augmentation.

3.3.1. Aircrew duty period is IAW AFI 11-202V3 and applicable MAJCOM Supplement. With any axis of the autopilot inoperative, limit the aircrew duty period to 12 hours and the augmented aircrew duty period to 16 hours.

3.3.1.1. An augmented flight crew will consist of a qualified AC, navigator, and flight engineer in addition to the normal flight crew. Addition of flight crewmembers after the first takeoff in a crew duty period is not considered augmentation.

3.3.1.2. The operations group commander will determine the augmented mission crew composition depending upon mission requirements.

3.4. Crew Rest and Ground Time. MAJCOM/DO may waive all or any part of a crew rest period in accordance with AFI 11-202V3. Crewmembers will enter crew rest a minimum of 12-hours before alert time or 12-hours before show time. Crew rest normally begins 1.5 hours after final engine shutdown. If any crewmember must perform duties past the 1.5 hour period, crew rest does not begin until post-flight duties are completed.

3.4.1. Minimum crew rest period is 12-hours. This provides the crew a minimum of 8-hours of uninterrupted rest plus time for transportation, free time, and meals. If crew rest is interrupted so that an

individual cannot get 8 hours of uninterrupted rest, the individual must be afforded 8 more hours of uninterrupted rest, plus reasonable time to dress, eat, travel, etc (Normally a minimum of 2 hours). Any interruption must be made only under the most exceptional circumstances.

3.4.1.1. Due to the long flights and numerous time zone changes involved in flying to and from overseas locations, ground time between landing and subsequent takeoff will not be planned for less than 18 hours, unless waived by OG/CC or equivalent. This ground time does not apply to "Op Stops" made within an aircrew duty period.

3.4.2. Post Deployment Recovery Time. Recovery time is used to recover from the cumulative effects of the mission and tend to personal needs and matters deferred while deployed six (6) weeks or longer.

3.4.2.1. Compensatory time is IAW Special Pass Regulations.

3.4.2.2. Recovery and reconstitution (R&R) time is utilized for crewmembers tend to personnel and professional matters. Leave is required if member leaves the local area

3.4.2.3. Crewmembers will be given compensatory and R&R days IAW AFI 11-202V3, as supplemented, and **Table 3.1.**

Table 3.1. Compensatory and R&R Days.

DEPLOYMENT LENGTH	COMPENSATORY DAYS	R&R DAYS	TOTAL DAYS
6 weeks	4	3	7
7 weeks	4	4	8
8 weeks	4	5	9
9 weeks	4	6	10
10 weeks	4	7	11
11 weeks	4	8	12
12 weeks	4	10	14

3.4.2.4. **Waivers** . The SQ/CC or acting representative is designated post deployment recovery time waiver authority.

3.5. Transition Duty Day. Transition duty day period (reference AFI 11-202V3 and applicable MAC-JOM supplement) applies to pilots, NAV/DSO, and FE.

3.6. Minimum Equipment. OGV will develop a Minimum Equipment Listing (MEL) for use by all crews as a guide to determine operable equipment necessary for safe flight. Units will ensure crews fly with a current copy of the MEL.

3.7. Transportation of Passengers. The AC is responsible for safe transportation of passengers (IAW AFI 11-401). The AC or designated individual will brief the applicable sections of the passenger briefing guide attachment.

3.8. Loading/Off-Loading.

3.8.1. **Personnel** . If determined by mission requirements, units will conduct engine running crew changes IAW **Chapter 6** of this volume.

3.8.2. **Baggage and Equipment** . Crews will manage the loading and off-loading of baggage and equipment IAW T.O. 1E-8C-5, *Basic Weight Checklist and Loading Data, USAF Series, E-8C Aircraft*.

3.9. Flying Clothing. Minimum requirements will be determined IAW AFI 11-301, *Aircrew Life Support (ALS) Program*. All crewmembers will wear nomex flying gloves during engine start, taxi, takeoff, landing, ERCC, and when performing emergency procedures. Flight gloves may be removed when they hinder completion of required duties.

3.10. Mode 4 Procedures.

3.10.1. Aircrews will conduct an operational ground test of the mode 4 on the following missions unless ground test equipment is not available.

3.10.1.1. All missions penetrating an ADIZ.

3.10.1.2. Operational missions.

3.10.1.3. Training missions requiring positive electronic identification.

3.10.1.4. ATO missions where safe passage procedures are implemented.

3.10.2. **Inoperable Mode 4** . Attempt to fix an inoperable mode 4 prior to takeoff. Do not delay takeoff nor cancel a mission for an inoperable mode 4, except when the aircraft will transit an area where safe passage procedures are implemented.

3.11. Lower Lobe Entry . MCC will obtain clearance from flight crew prior to any crewmember entering a lower lobe. At least one crewmember in the lower lobe will maintain communication with flight deck. Hearing protection should be worn by all crewmembers entering lower lobe.

3.12. Filing Missed Meals while TDY. Missed meals due to crew rest and duty limitations will be filed IAW *Joint Federal Travel Regulation* (JFTR).

3.13. Alert Procedures. Alert procedures will be initiated by OG/CC, or higher, when mission requirements require quick response to HHQ taskings.

3.13.1. **ALPHA Alert** . Aircrew is capable of launching in one (1) hour of crew notification of launch order. Crews should be quartered near the alert aircraft with sufficient transportation to get them to the aircraft in minimum time. A crew will not stay on ALPHA alert duty for more than 48 hours. After 48 hours, the crew must be launched, released, or entered into pre-departure crew rest. Crew duty day begins when the crew is notified of the launch order.

3.13.2. **BRAVO Alert** . Aircrew is capable of launching in four (4) hours of crew notification of launch order. Crewmembers are given 12-hours of pre-alert crew rest. After crew rest they are placed on telephone standby. A crew will not stay on BRAVO alert duty for more than 48 hours. After 48 hours, the crew must be launched, released, or entered into pre-departure crew rest. Crew duty day begins when the crew is alerted for duty.

3.13.3. **Aircraft Alert Procedures** . Aircraft will be prepared for alert launch IAW T.O. 1E-8C-1, *Flight Manual, USAF Series Aircraft, E-8C*, and local directives.

Chapter 4

FLIGHT CREW OPERATING PROCEDURES

4.1. General. This Chapter contains operating procedures applicable to the flight crew. This information is in addition to AFI 11-202V3, AFI 11-401, and applicable MAJCOM supplements.

4.1.1. **Critical Phases of Flight.** Critical phases of flight are defined as takeoff, air refueling, approach, landing, emergencies and flight below 3000 feet AGL. Only instructor/SEFE-qualified pilots, NAV/DSOs, FEs and aircrew members performing emergency duties are authorized to stand during critical phases of flight. Any additional exceptions require AC approval.

4.1.2. **Icing Restrictions** . Do not fly in reported severe icing conditions any time. If inadvertently encountered, the pilot will immediately depart such conditions. Short climbs or descents through areas of forecast severe and/or reported moderate icing are permitted; however, sustained flight in these conditions is prohibited.

4.1.3. **Turbulence Restrictions** . Do not fly in areas of forecast or reported severe turbulence. Every effort will be made to avoid areas of reported moderate turbulence. If moderate turbulence is forecast along planned route of flight, the AC will determine the best course of action to vacate the condition, if encountered.

4.1.4. **Thunderstorm Avoidance** . Pilots will neither file a flight plan route nor fly into an area of known or forecast thunderstorm activity when the weather radar is inoperative or unusable and thunderstorm activity cannot be visually circumnavigated.

4.1.5. **Fuel Requirements** . Plan all missions to arrive overhead destination/worst case alternate fix with no less than 15,000 pounds fuel reserve, or in accordance with AFI 11-202V3; whichever is greater.

4.1.5.1. Minimum landing fuel is 12,000 pounds. If it becomes apparent the aircraft will land with 12,000 pounds of fuel remaining or less, declare "Minimum Fuel" and land short of destination; or divert as required.

4.1.5.2. Emergency landing fuel is 10,000 pounds.

4.1.6. **In-flight Meals** . The pilots will not consume box lunches containing the same prepared ingredients within 1.5 hours of each other before or during flight. Frozen meals which are cooked prior to consumption, sealed in-flight rations, fruits, and commercially prepared and sealed items have a much lower potential for bacterial contamination; and may be common to both pilot’s lunches.

4.1.7. **Aircraft Ground Refueling** . FEs, certified on the squadron’s letter of Xs, are authorized to refuel the aircraft.

4.1.8. **Three-Engine Ferry Flights** . Three engine ferry flights will not be conducted unless specifically approved by applicable MAJCOM/DO. Required crew qualification will be determined by OG/CC or equivalent.

4.1.9. **Temperature Correction.** Aircrews performing approaches and landings at locations where temperatures are 0 degrees centigrade or below will refer to the Flight Information Handbook, section D, Temperature Correction Chart, to establish a corrected HAA, HAT, and MDA as appropriate.

4.1.10. **Airfield Certification.** All pilots, and staff mission planners will reference the Airfield Qualification Program (AQP) booklet prior to operating missions into unfamiliar airfields. In addition, they will review the AMC Airfield Suitability and Restrictions Report (ASRR) as available and should contact HQ AMC/DOVS for updates to airfield operability and weight bearing capability as required. The Airfield Information Help Desk can answer most airfield questions. They are available 24 hours per day, 7 days per week, by calling DSN 779-3112. The ASRR is available online at **https://amc.scott.af.mil/do/doa/dovs.HTM**.

4.1.11. **Aircraft Interior Lighting.** During night parking, do not use the high level flight deck lighting until after the aircraft is chocked and brakes are released, so pilots can ensure the aircraft does not roll.

4.2. Takeoff and Landing Data. All initial takeoff and landing data will be computed/reviewed during mission planning by a FE. Prior to flight, the AC, CP, or an additional FE will check the takeoff and emergency return data.

4.2.1. **Reduced Thrust** . Reduced thrust takeoffs may be accomplished on a wet runway provided the runway surface is free of snow, ice and slush. Reduced thrust takeoffs are also permitted with falling precipitation provided precipitation is not moderate to heavy and there is no standing water.

4.2.2. **Minimum Vref** . Vref will be no less than 120 KIAS for all approaches.

4.3. Takeoff and Landing Restrictions. The minimum runway length for normal operations is 9,000 feet by 135 feet width, unless waived by the OG/CC. For weather diverts or other unusual circumstances, the minimum runway length is 7,000 feet by 135 feet in width. Minimum taxiway width is 75 feet, unless waived by the OG/CC.

4.3.1. **Last Chance** . The SOF, if available, will conduct a last chance inspection prior to takeoff, or as directed by the OG/CC.

4.3.2. **Rolling Takeoffs** . Should be made whenever critical field length permits. Aircraft will normally takeoff and land on the longest available runway.

4.3.3. **Tailwind** . Takeoffs and landings with a tailwind are not recommended. If operational necessity or ATC considerations dictate, a tailwind takeoff or landing may be accepted IAW T.O. 1E-8C-1-1, *Flight Manual, USAF Series Performance Data, E-8C Aircraft*.

4.3.4. **RCR** . Aircraft will not takeoff or land when reported RCR is less than 10. The OG/CC has the authority to waive the minimum RCR to 7 when operational necessity warrants. Some airports may report the average RCR value, in this case the pilot will ask for the minimum RCR recorded on the runway. Aircrews will not conduct ground operations (taxi or towing) with RCR less than 7.

4.3.5. **Crosswind Restrictions** . Unless further restricted by aircraft gross weight or emergency conditions, the following crosswind limits apply unless waived to aircraft limits by OG/CC.

4.3.5.1. Maximum crosswind component (gust included) for takeoff or landing on a dry runway is 25 knots.

4.3.5.2. Takeoff maximum crosswind on a wet runway is 20 knots.

4.3.5.3. Landing maximum crosswind on wet runway is IAW T.O. 1E-8C-1-1.

4.3.6. **Maximum Landing Gross Weight** . Landing gross weight will not exceed 247,000 pounds. If mission requirements dictate, the OG/CC may authorize landings over 247,000 pounds, provided all other landing requirements can be safely met.

4.3.7. **Landings** . All landings will be flown so as to touchdown in the designated touchdown zone (1000-2000 feet). If it appears that the actual touchdown will occur beyond the first 1/3 or 3,000 feet (whichever is less) of the landing runway, initiate a go-around.

4.3.7.1. Normal full stop landing with less than 40 degrees of flaps are prohibited.

4.3.7.2. When landing on a dry runway, braking may be delayed until runway remaining equals computed landing distance.

4.3.8. Multiple Full Stop Landings. The FE will determine the brake energy used during landing and then using the decision speed (V1), without headwind correction, determine the brake energy for an abort during a subsequent takeoff. Do not takeoff until the combined energy after ground cooling is less than 40 million ft-lbs. If takeoff is made with brake energy above 10 million ft-lbs., air-cooling procedures will be followed.

4.3.9. **Arresting Cables** (does not include recessed cables).

4.3.9.1. Do not land on approach end arresting cables. If the aircraft lands before the cable, the crew should contact the tower to have the cable inspected.

4.3.9.2. Do not takeoff or land on a runway with raised arresting gear reported as slack, loose or improperly rigged by NOTAM, ATIS, or ATC.

4.3.10. Aircraft Category. The E-8 is a category D aircraft. Some landing configurations and gross weight combinations will require the use of category E minimums. Refer to Flip GP for guidance.

4.4. Occupancy of Flight Crew Duty Positions.

4.4.1. **Takeoffs and Landings** . The most qualified pilot will accomplish the takeoff and landing when a distinguished visitor (Code 4, Code 4 equivalent, or higher) is on board. A qualified AC will make the takeoff and landing from the left seat. Instructor pilots may takeoff or land in either seat with the above condition.

4.4.2. **Pilot in Command (PIC)** . The pilot in command will be at a set of flight controls during all critical phases of flight. This does not preclude a seat swap with another AC or IP as long as the flight orders reflect the appropriate change for the designated pilot in command.

4.4.2.1. Squadron may designate a primary and secondary (double asterisk) PIC on the flight orders. If an additional IP/SEFE or AC is on the flight that individual should be the secondary PIC. Only one secondary PIC is permitted on a flight unless it can be clearly determined who will be acting as PIC if two secondary PICs are occupying the pilots' positions at the same time.

4.4.2.2. FP's will not be designated as PIC. However, they may occupy the left seat without IP supervision.

4.4.3. **Pilot Duties** . CPs may perform duties in the left seat with IP supervision. Senior officers will fly IAW AFI 11-2E-8V1 restrictions.

4.4.4. **Flight Deck** . During flight, if either pilot leaves the flight deck, a qualified FE must occupy the flight engineer position or an unqualified FE supervised by an instructor FE or IP.

4.4.5. **Unqualified Personnel** . Unqualified personnel who are not in training will not occupy any pilot crew duty position during any phase of flight, unless waived by OG/CC.

4.4.6. **Observer** . All flight deck seats should be manned below 10,000 feet MSL. An observer, if available, will be on headset and actively scan for traffic.

4.5. Navigation.

4.5.1. **Position/Heading Checks** . A position check will be made as soon as practical after initial level off. Position checks are required and will normally not exceed 1 hour. A heading check will be made as soon as practical after level off. All position and heading checks will be annotated on the navigator's log.

4.5.2. The NAV/DSO will track all in-flight clearances.

4.5.3. The E-8 is Area Navigation (RNAV) certified.

4.5.4. Required Navigation Performance (RNP Airspace). Airspace where RNP is applied is considered special qualification airspace. The E-8 is approved for operation in RNP airspace with operational limitations based on navigational equipment.

4.5.4.1. RNP-10 compliance includes navigation accuracy within 10 NM of actual position 95 percent of the time. The E-8 may operate in RNP-10 airspace when the following conditions are met:

4.5.4.1.1. The "INU-only" navigation mode is selected for the steering solution. Other Navigation Modes may not be used for operations in RNP-10 airspace.

4.5.4.1.2. Updates will be IAW RNP/BRNAV update and contingency procedures in this volume.

4.5.5. Basic Area Navigation (BRNAV) and RNP-5 Airspace. Compliance includes navigation accuracy within 5NM of actual position 95 percent of the time. BRNAV navigation accuracy criteria is RNP-5. Aircraft may operate in BRNAV/RNP-5 airspace when the following conditions are met:

4.5.5.1. The "INU-only" or the INU with manual in-flight updating or point to point navigation using the flight management system (FMS) shall be the only navigation modes used for operations in BRNAV airspace.

4.5.5.2. Should NAVAIDS become unavailable, either through radio failure or denial, the "INU-only" solution cannot be used longer than 7.5 hours from the time the INUs were commanded to the NAV mode or the last update, whichever is later. Refer to RNP-10/BRNAV Update and Contingency Procedures in this volume.

4.5.5.3. Updates will be IAW RNP/BRNAV update and contingency procedures in this volume.

4.5.6. RNP-10/BRNAV Update and Contingency Procedures.

4.5.6.1. Aircraft must exit RNP-10/BRNAV airspace 7.5 hours after the INU systems were placed in NAV mode after either a full gyrocompass ground alignment or an in-flight update.

4.5.6.2. An in-flight update may be conducted on one INU at a time within coverage of an FAA/CAA approved radio-NAVAID.

4.5.6.3. The resulting update must provide a position that agrees with the position provided by the radio-NAVAID plus or minus 0.3 NM.

4.5.6.4. After the first INU successfully completes an in-flight update and its position accuracy is verified, the second INU may be updated and its position compared to the first INU, or the radio-NAVAID.

4.5.7. RNP/BRNAV Flight Planning. The PIC will review airspace requirements (i.e. specific RNP level and contingency actions, etc), verify the aircraft is approved for RNP/BRNAV operation, and assess mission impact when flying in RNP-10/BRNAV airspace.

4.5.7.1. Enroute. Both INUs must be operational at the RNP-10/BRNAV entry point. Periodic crosschecks will be accomplished to identify navigation errors and prevent inadvertent deviation from ATC cleared routes. Advise ATC of the deterioration or failure of navigation equipment below navigation performance requirements and coordinate appropriate actions.

4.5.8. Post Flight. Document in AFTO Form 781 malfunctions or failures of RNP/BRNAV required equipment, including the failure of this equipment to meet RNP/BRNAV tolerances.

4.5.9. Reduced Vertical Separation Minimum (RVSM) Airspace. Airspace where RVSM is applied is considered special qualification airspace. Both the aircrew and the specific aircraft must be approved for operations in these areas. These specific E-8's are approved for unrestricted use in the full RVSM envelope. Refer to FLIP GP and the following guidance for RVSM requirements:

4.5.10. RVSM Equipment. Both primary altimeters, the autopilot (to include the altitude hold function), the altitude alerter, and the IFF transponder must be fully operational before entry into RVSM airspace. Should any of this equipment fail before entering RVSM airspace, request a new clearance so as to avoid this airspace.

4.5.10.1. Autopilot. The autopilot shall be engaged during level cruise except when circumstances such as the need to re-trim the aircraft or turbulence procedures require disengagement.

4.5.10.2. Altimeters. Crosscheck the altimeters (STBY to RESET) before or immediately upon entry to RVSM airspace. The PIC will ensure that readings of all altimeters are recorded and retained for use in contingency situations.

4.5.10.3. Should any of the required equipment fail after entry into RVSM airspace, immediately notify ATC and coordinate a plan of action.

4.5.11. RVSM Operations. Continuously monitor systems and crosscheck altimeters to ensure they agree ± 200 ft.

4.5.11.1. Aircrews should limit climb and descent rates to 1,000 feet per minute when operating in the vicinity of other aircraft to reduce potential effects on TCAS operations.

4.5.12. Post Flight. Document (in the AFTO Forms 781) malfunctions or failures of RVSM required equipment, including the failure of this equipment to meet RVSM tolerances.

4.6. Air Refueling Restrictions.

4.6.1. **Copilots** . CPs are authorized to fly the aircraft up to and including pre-contact with any refueling qualified pilot in the left seat. Any CP may conduct air refueling under IP supervision. Certified

CPs may air refuel under AC supervision. All requirements must be met IAW AFI 11-2E-8, Volume 1, *E-8 Aircrew Training*.

4.6.2. **Manual Operations** . Manual Boom Latching or Tanker Manual Operation without tanker disconnect capability will not be accomplished unless an actual fuel emergency exists or approved by the OG/CC or equivalent.

4.6.3. **Turns** . Do not initiate turns from air refueling track until establishing 1000 feet vertical separation between the receiver and the tanker

4.7. Inflight Maneuver. Maneuvers listed in **Table 4.1.** are authorized for qualification and continuation training. They are applicable to all E-8 aircraft, except when prohibited or restricted by the flight manual or other current directives.

4.7.1. First Pilot (FP) Restrictions. FP's will comply with AC restrictions. Exception: Items identified by the OG/CC during initial placement in FP status will not be accomplished without IP supervision.

Table 4.1. Maneuvers Authorized for Qualification and Continuation Training.

MANEUVER	POSITION	RESTRICTIONS
Touch-and-Go	IP/AC/CP	1, 2, 5, 7, 8, 18
Approach and Landing, Sim Engine Out	IP/AC	3, 6, 7, 8, 9, 10, 16, 18
Approach and Go Around, Sim Engine Out	IP/AC	3, 7, 8, 9, 10, 15, 16
Tactical Arrivals and Departures (TAAD)	IP/AC	4
Air Refueling Envelope Limits Demo	IP/D	13
SEFTOC	IP/D	3, 7, 8, 9, 11, 15, 16
Spoiler/Lateral Control Demo	IP/D	12, 15
Unusual Attitude Recoveries	IP/D	9, 7, 12, 15, 16, 17
14/25 Flap Touch-and-Go	IP/D	1, 7, 8, 18
Landing Attitude Demonstration	IP/D	1, 7, 8, 14, 18
Copilot Air Refueling	CP	5

KEY:

IP/AC – Instructor Pilot or Aircraft Commander

IP/D – Direct IP supervision is required (IP at the controls)

CP- Copilot

RESTRICTIONS:

1. IP: 200 / ½, 2400 RVR or lowest suitable approach minimums, whichever is higher, RCR of 10 or greater (precipitation not moderate to heavy). Runway must be free of snow, ice slush, and standing water (no RSC).

2. AC/CP: Day, 1000/3, RCR 23, home station only. Airfields other than home station require SQ/CC approval.

3. Day: Circling Minimums. Night: 1000/2 or circling minimums, whichever is higher.

4. Wx: 5000/3; Certified on Letter of X's.

5. IAW AFI 11-2E-8 Volume 1, Chapter 7

6. Flaps 40 or 50 only. IP- Simulated three-engine touch, four engine go permitted. AC Simulated three-engine full-stop only.

7. No passengers aboard (see AFI 11-401 and MAJCOM supplement).

8. 9,000' x 135' or minimum runway length and width required to make a safe, normal, full-stop landing, whichever is higher. Gross Weight 247,000 lbs. or less.

9. IP/AC must make public address call prior to initiating. If multiple maneuvers are to be accomplished, one public address call is sufficient for the series.

10. Initiate planned go-around at DH (if applicable) or 200 feet AGL, whichever is higher. If an unplanned go-around or missed approach is required, symmetrical thrust on all four engines will be used as soon as practical.

11. Do not retard the throttle for SEFTOC prior to reaching 200' AGL minimum.

12. Inflight requirements: IP must be at flight controls. Initiated and completed above

10,000 feet AGL. Aircraft must maintain day/VMC conditions. Bank angle will not exceed 30 degrees; pitch attitude will not exceed 15 degrees high or low. Compute MCT prior to initiating maneuver.

13. IP must be at a set of flight controls. Tanker must have positive boom disconnect capability. Limits are as follows:

Left/Right—8 degrees (KC-135); 18 degrees (KC-10)

Up/Down—22 and 38 respectively

In/Out— 8/16 (KC-135); 19 feet extension (KC-10)

14. Four engine only. Normally notify the SOF of intentions. Initiate go around no less than 3000 ft of runway remaining.

15. WST is primary for accomplishment.

16. No minimum essential ground personnel (MEGP) onboard.

17. Not permitted during spouse orientation flights.

18. Maximum Crosswind – 15 knots (IP), 10 knots (AC/CP).

4.8. Transition Training. Transition is defined as any approach or landing other than one to a full stop.

4.8.1. SQ/DO or equivalent will be advised before accomplishing unscheduled transition

4.8.2. Seat swaps during transition will be made on the downwind leg of either the IFR or VFR traffic pattern. Crews should consider extending the downwind leg of a VFR pattern to afford more time to complete crew movement.

4.8.3. Transition is not permitted with passengers onboard aircraft. For the purpose of transition training MEGPs are not considered passengers.

4.9. Emergency Procedures. In the event of an emergency, the AC/IP will accomplish the final approach and landing unless the situation prevents/dictates otherwise. Student training may continue at the discretion of the instructor. Simulated emergency procedures practice will be terminated.

4.9.1. **Fuel Dumping** . Fuel dumping will be conducted only to reduce gross weight in an emergency or for operational necessity. When circumstances permit, dump fuel above 5,000 feet AGL over unpopulated areas or in designated fuel dump areas. Avoid circling descents. Advise the appropriate air traffic control agency of intentions, altitude, location, when beginning fuel dumping and when the operation has been completed. Make the appropriate entry in the AFTO Form 781.

4.9.2. **Inflight Engine Failure** . If an engine is shutdown in flight, the mission will be terminated and a landing made as soon as practical.

4.9.3. **Inflight Troubleshooting** . Aircrews will not conduct in-flight troubleshooting after flight manual emergency procedures are completed. Once a malfunctioning system is isolated, that system should not be used again unless essential for safe recovery.

4.10. Simulated Emergency Procedures. Simulated emergency procedures are normally considered those procedures where the normal configuration of the airplane is altered (i.e., an engine pulled to idle to simulate the loss of an engine). All aircraft systems will be restored to normal operation prior to landing, except for simulated engine-out landings.

4.10.1. **Prohibited Simulated Emergencies** .

4.10.1.1. Engine failure takeoff continued on the runway.

4.10.1.2. Two-engine operations (two engines at idle); however, two engine procedures may be practiced, e.g., only one engine at idle.

4.10.1.3. Three-engine rudder boost-out operations (one engine at idle and rudder boost off); however, three engine rudder boost out procedures may be practiced, e.g., one engine at idle and rudder boost on.

4.10.1.4. Actual engine shutdown, except during functional check flights (FCF).

4.10.2. **Inflight Practice Approach to Stall Recovery (IP Required).** This is normally a simulator-only maneuver; however, if a simulator is unavailable or inadequate, the OG/CC or equivalent may authorize it to be accomplished in flight. A thorough briefing and review of Section 6 of the T.O. 1E-8C-1 will be conducted during mission planning.

4.10.2.1. In addition to T.O. 1E-8C-1 limitations, the following restrictions apply:

4.10.2.1.1. Stick shaker warning system must be operating.

4.10.2.1.2. 250,000 pounds or less gross weight.

4.10.2.1.3. Day VMC.

4.10.2.1.4. Performed at an altitude that allows for recovery of at least 5,000 feet above clouds and 10,000 feet above the terrain. The maneuver will not be flown at any time over heavily populated areas.

4.10.2.1.5. Do not demonstrate or practice complete stalls.

4.10.2.1.6. Initiate recovery no later than charted stick shaker speed, first indication of stick shaker or initial buffet, whichever occurs first.

4.10.2.1.7. No passengers on board.

4.11. Insect and Pesticide Control.

4.11.1. **Responsibility** . Aircraft commanders will ensure required spraying is accomplished according to AFJI 48-104, *Quarantine Regulations of the Armed Forces*; DOD 4500.54-G, *DOD Foreign Clearance Guide (FCG)*; or as directed by higher headquarters. Certify the spraying on Customs Form 7507 or on forms provided by the country transited.

4.11.2. **Responsibility of Aircraft Commander Inflight** . When seeing any insect or rodent infestation of the aircraft in-flight, notify the destination command and control agency, base operations, or airport manager of the situation before landing so the proper authorities can meet the aircraft.

4.11.3. **Procedure at Aerial Port of Disembarkation (APOD)** . On arrival at an APOD, do not open doors or hatches except to enplane officials required to inspect the aircraft for insect or rodent infestation or to deplane the minimum number of crewmembers required for block-in duties. Do not on or offload cargo or passengers until the inspection is satisfactorily completed. This procedure may be altered to satisfy mission or local requirements, as arranged by the base air terminal manager or the local command and control organization.

4.12. Formation Restrictions. E-8 will not fly in formation with other heavy aircraft for purposes other than air refueling.

4.13. Practice Phase III Retrograde Operations. The AC will inform the crew when simulated retrograde procedures are terminated. All equipment power-off procedures will be simulated. Do not exceed 6000 ft VVI and initiate final level off NLT 10,000 feet AGL.

4.14. Communications.

4.14.1. **Aircraft Interphone** . Limit transmissions to those essential for crew coordination during all critical phases of flight. One flight crew member will monitor primary mission crew interphone during critical phases of flight.

4.14.2. **Command Radios** . The pilot not flying the aircraft normally makes all ARTCC radio calls. In terminal areas the pilot, copilot, FE, and navigator, will monitor the primary command (ATC) radio unless directed otherwise. Pilots should not monitor C2 frequency in the terminal area. The navigator or designated crewmember should monitor C2 frequencies on the inbound and outbound leg, during takeoff, climb-out, descent, approach, landing and traffic pattern operations, unless otherwise directed.

4.14.3. **Guard** . One of the pilots will monitor Guard frequency. **EXCEPTION:** Pilots will not monitor guard frequencies during the rendezvous and air refueling (AR). A flight crew member will monitor guard during the rendezvous and AR.

Chapter 5

MISSION CREW PROCEDURES

5.1. General. This chapter contains roles and responsibilities for certain mission crew positions. This information is in addition to AFI 11-214, *Aircrew, Weapons Director, and Terminal Attack Controller Procedures for Air Operations*, AFTTP 3-1.30, *Tactical Employment Joint STARS*, T.O. 1E-8C-43-1-1, *Flight Manual, USAF Series, E-8C Aircraft Mission Systems Operations,* T.O. 1E-8C-43-1-2, *Flight Manual, USAF Series, E-8C Aircraft Mission Console Operations*, T.O. 1E-8C-43-1-1-1, *Supplemental Flight Manual—Mission Systems Operations*, and the current syllabus for the respective crew positions. Not all positions will have additional information.

5.2. E-8 Mission Crew Composition. The E-8C mission crew is comprised of 11 different specialties. They are mission crew commander (MCC), deputy mission crew commander (DMCC), senior director (SD), sensor management officer (SMO), air weapons officer (AWO), senior director technician (SDT), air operations technician (AOT), airborne target surveillance supervisor (ATSS), airborne intelligence officer/technician (AIO/T), airborne communications systems technician (CST) and airborne mission system specialist (AMSS).

5.3. Responsibilities and Procedures. Mission crewmembers will adhere to following responsibilities and procedures in addition to applicable directives.

5.3.1. **Mission Crew Commander.**

5.3.1.1. Coordinate with the AC to conduct mission execution.

5.3.1.2. Declare operations normal/on-station/off-station and advise external agencies about the aircraft status.

5.3.1.3. Collate and compile mission reports and summaries.

5.3.1.4. Maintain responsibility for classified materials and proper destruction.

5.3.2. **Deputy Mission Crew Commander.**

5.3.2.1. Ensure the ground commander and common ground stations (CGSs) are aware of on-station/off-station and aircraft status.

5.3.2.2. Assume the responsibilities of the MCC in the event of his/her absence.

5.3.3. **Airborne Intelligence Officer/Technician.**

5.3.3.1. Analyze incoming reports from external intelligence collection agencies and determine impact on mission execution.

5.3.3.2. Verify and update order of battle data.

5.3.3.3. Operation the Broadcast Intelligence system.

5.3.3.4. Report radar tracks to external intelligence collection agencies for further collection and amplification.

5.3.4. **Senior Director.**

5.3.4.1. Monitor and assess current air/ground situation; coordinate mission changes with appropriate agencies.

5.3.4.2. Orchestrate the execution of surveillance, attack support, and radar timeline activities conducted by the Operations Section. This team will consist of the SD, SMO, AWOs, SDT, and AOTs.

5.3.4.3. Develop an effective communications plan.

5.3.5. **Sensor Management Officer.**

5.3.5.1. Conduct effective radar timeline management; inform crew of sensor anomalies.

5.3.5.2. Coordinate with SD for management of the Operations Section.

5.3.6. **Senior Director Technician.**

5.3.6.1. Ensure tracking responsibilities/continuity in the AOR.

5.3.6.2. Coordinate with the CST for JTIDS link operations.

5.3.6.3. Oversee activities of Operations Section as directed by the SD.

5.3.7. **Air Weapons Officer.**

5.3.7.1. Use sensor data to detect/track/classify targets; relay and update information to assigned aircraft.

5.3.8. **Air Operations Technician.**

5.3.8.1. Use sensor data for accurate tracking in assigned AOR.

5.3.9. **Airborne Target Surveillance Supervisor.**

5.3.9.1. Maintain voice and SCDL contact with CGS to accomplish ground component commander objectives; process radar service requests as required.

Chapter 6

LOCAL PROCEDURES SUPPLEMENT

6.1. General. This supplement will be distributed to MAJCOM/NAF OPRs, as applicable. This supplement should not duplicate and will not be less restrictive than the provisions of this or any other publication without prior authorization from the appropriate MAJCOM/NAF OPR.

Chapter 7

AIRCRAFT SECURITY

7.1. General. This chapter provides guidance on aircraft security and preventing and resisting aircraft piracy (hijacking) of E-8 aircraft. AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*; AFI 31-101, *The Air Force Installation Security Program*; and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members or missions to the public.

7.2. Security. The E-8 is designated a security priority Protection Level 2 (PL), or equivalent, resource. The AC is responsible for ensuring aircraft security is provided at destination and enroute stops. The aircraft will be secured as a PL 2 resource according to AFI 31-101, The Air Force Physical Security Program. The AC will provide a copy of the flight orders to the entry controller as a means to identify persons authorized entry to the aircraft. The AC will take all possible precautions to ensure classified material and equipment is not compromised.

7.2.1. **No Established Restricted Area** . When no permanent or established restricted area parking space is available, establish a temporary restricted area consisting of a raised-rope barrier, and post with restricted area signs. Provide an entry controller (at least one per every two aircraft) supported by a two-person security response team capable of 5-minute response, and restricted access. Portable security lighting will be provided during the hours of darkness if sufficient permanent lighting is not available.

7.2.2. **Non-US Military Installations** . The AC determines the adequacy of local security capabilities to provide aircraft security commensurate with this volume. If he or she determines security to be inadequate, the aircraft will depart to a station where adequate security is available.

7.2.3. **Visits to Aircraft** . The security force must be made aware of all visits to the aircraft.

7.2.4. **Termination of Security Support** . Security support is a continual requirement and is not negated by the presence of aircrew or ground crewmembers. Security force support terminates only after the aircraft doors are closed and the aircraft taxis.

7.2.5. **Mission Documents and Disks** . The MCC is responsible for the security of classified mission documents and disks. They may be stored on the aircraft when U.S. security personnel are used as the entry controller. In the event a stop is made at a location where no U.S. security personnel are based, the MCC will designate a minimum of two crewmembers to remain on the aircraft to provide security.

7.2.6. **Storage** . Ensure COMSEC and other classified materials are turned in at destination and receipts are obtained for COMSEC and classified material if not stored on the aircraft. Combat crew communications or appropriate command and control agency will provide temporary storage for COMSEC and other classified materials during en route, turnaround, and crew rest stops.

7.3. Enroute Security. The planning agency must coordinate with the execution agency to ensure adequate enroute security is available. Aircraft commanders will receive a threat assessment and an enroute security capability evaluation briefing for areas of intended operation prior to home station departure and should request updates from enroute C2 agencies as required. If required, a mission security team (MST) will be assigned to the mission.

7.3.1. **Mission Security Team** . The MST normally consists of three USAF security forces personnel, but may include more depending on security requirements. The team travels in MEGP status and is responsible to the aircraft commander at all times. Aircraft commanders are responsible for the team's welfare (transportation, lodging, etc.). The aircraft commander will ensure MST members receive a briefing on applicable aircrew items.

7.3.2. **Aircraft Commander Responsibilities** . The aircraft commander will assess the local situation and take the following actions as required:

7.3.2.1. Request area security post or patrols from local security forces commensurate with appropriate security designation priority. If local authorities request payment for this service, use AF Form 15, **USAF Invoice**.

7.3.2.2. During short ground times, direct crewmembers to remain with the aircraft and maintain surveillance of aircraft entrances and activities in the aircraft vicinity.

7.3.2.3. If local security forces are unavailable or are unacceptable to the aircraft commander and the crew has not been augmented with a MST, the aircraft commander may waive the flight duty period limits and crew rest requirements and depart as soon as possible for a base considered reliable. Report movement and intentions to the controlling agency as soon as practical. If departure is not possible, the aircrew must secure the aircraft to the best of their ability. In no case, will the entire crew leave the aircraft unattended. Crew rest requirements will be subordinate to aircraft security when the airframe may be at risk. The aircraft commander should rotate a security detail among the crew to provide for both aircraft protection and crew rest until relief is available. Request security assistance from the nearest DOD installation, US Embassy, local military, or law enforcement agencies as appropriate.

7.3.3. **Unescorted Entry** . Unescorted entry is granted to aircrew members and support personnel assigned to the mission who possess their home station AF Form 1199, **Air Force Entry Control Card**, supported by an EAL or aircrew orders. Aircrew members and assigned crew chiefs are authorized escort authority.

7.3.4. **Secure Enroute Ramp** . When parking on a secure en route ramp, the aircraft will normally be left unlocked to allow ground support personnel immediate access. If the aircraft commander determines that security is necessary, the crew will use only breakable seals (i.e. forestry service "boxcar" seals, safety wire, etc.).

7.3.4.1. If ground personnel need to access a sealed aircraft, they will request permission from local command and control agency, which will log the breach in their logbook and notify the crew at alert time. Ground personnel will reseal the aircraft using similar means.

7.3.4.2. Additionally, if unauthorized entry is suspected or an unauthorized seal breakage occurs report via the appropriate Air Force-approved form for an aircraft commander's report on services or facilities.

7.3.5. **Non-ACC Enroute Ramp** . When parking on a non-ACC en route ramp where the AC determines that security may be a problem, the aircraft will be sealed or locked using procedures in **Detecting Unauthorized Entry**. If further security is required, other measures (SF teams, local security, etc.) will be located.

7.4. Detecting Unauthorized Entry. If, in the aircraft commander's judgment, the aircraft needs to be sealed in order to detect unauthorized entry, then:

7.4.1. Secure the hatches and doors in a manner that will indicate unauthorized entry (e.g., tape inside of doors and hatches to airframe so that entry pulls tape loose).

7.4.2. Wipe the immediate area around lock and latches clean to aid in investigation of a forced entry.

7.4.3. Report any unauthorized entry or tampering to the Office of Special Investigation (OSI), security forces or local authorities, and the C2 agency. Have aircraft thoroughly inspected prior to flight.

7.5. Forms Prescribed. AF Form 847, **Recommendation for Change of Publication;** AFTO Form 781, **ARMS Aircrew/Mission Flight Data Document;** Customs Form 7507, **General Declaration;** AF Form 15, **USAF Invoice;** AF Form 1199, **Air Force Entry Control Card**

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DCS/Air & Space Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DOD 4500.54-G, *DOD Foreign Clearance Guide (FCG)*

Joint Federal Travel Regulation (JFTR)

T.O. 1-1C-1-38, *E-8 Air Refueling Procedures With KC-135 and KC-10*

T.O. 1E-8C-1, *Flight Manual, USAF Series Aircraft, E-8C*

T.O. 1E-8C-1-1, *Flight Manual, USAF Series Performance Data, E-8C Aircraft*

T.O. 1E-8C-5, *Basic Weight Checklist and Loading Data, USAF Series, E-8C Aircraft*

T.O. 1E-8C-43-1-1, *Flight Manual, USAF Series, E-8C Aircraft Mission Systems Operations*

T.O. 1E-8C-43-1-1-1, *Supplemental Flight Manual—Mission Systems Operations*

T.O. 1E-8C-43-1-2, *Flight Manual, USAF Series, E-8C Aircraft Mission Console Operations*

AFTTP 3-1.30, *Tactical Employment Joint STARS*

AFPD 11-2, *Aircraft Rules and Procedures*

AFI 11-2E-8V1, *E-8 Aircrew Training*

AFI 11-202V3, *General Flight Rules*

AFI 11-214, *Aircrew, Weapons Director, and Terminal Attack Controller Procedures for Air Operations*

AFI 11-301, *Aircrew Life Support (ALS) Program*

AFPD 11-4, *Aviation Service*

AFI 11-401, *Flight Management*

AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*

AFI 31-101, *The Air Force Installation Security Program*

AFI 33-360V1, *Publications Management Program*

AFMAN 37-139, *Records Disposition Schedule*

AFJI 48-104, *Quarantine Regulations of the Armed Forces*

Abbreviations and Acronyms

AC—Aircraft commander

ACC—Air Combat Command

ADIZ—Air defense identification zone

AIO/T—Airborne intelligence officer/technician

AF—Air Force

AFFSA—Air Force Flight Standards Agency

AFI—Air Force instruction

AFJI—Air Force instruction (interservice)

AFMAN—Air Force manual

AFPD—Air Force policy directive

AFTO—Air Force technical order

AGL—Above ground level

ALS—Aircrew life support

AMC—Air Mobility Command

AMSS—Airborne mission system specialist

ANG—Air National Guard

APOD—Aerial port of debarkation

AQP—Airfield Qualification Program

AR—Air refueling

ARMS—Aviation Resource Management System

AR—Air refueling

ARCT—Air refueling control time

ARTCC—Air route traffic control center

ASRR—Airfield Suitability and Restrictions Report

ATC—Air traffic control

ATIS—Automated terminal information service

ATO—Air tasking order

ATSS—Airborne target surveillance supervisor

C2—Command and control

CGS—Common ground station

COMSEC—Communication security

CP—Co-pilot

CSS—Computer systems squadron

CST—Airborne communications system technician

DETCO—Detachment commander

DH—Decision height

DMCC—Deputy mission crew commander

DNIF—Duties not to include flying

DO—Director of operations

DOD—Department of Defense

DOTV—Flight standardization

DRU—Direct reporting unit

EMCON—Emission condition

ERCC—Engine running crew change

ETA—Estimated time of arrival

FCF—Functional check flight

FCIF—Flight crew information file

FE—Flight engineer

FLIP—Flight information publication

FOA—Field operating unit

FT—Foot or feet

FT-LBS—Foot-pounds

HAA—Height above aerodrome

HAT—Height above touchdown

HHQ—Higher headquarters

HQ—Headquarters

HVAA—High value airborne asset

IAW—In accordance with

IP—Instructor pilot

JSTARS or Joint STARS—Joint Surveillance Target Attack Radar System

JFTR—Joint Federal Travel Regulation

JTIDS—Joint Tactical Information Distribution System

KIAS—Knots indicated airspeed

LPU—Life preserver unit

MAJCOM—Major command

MCC—Mission crew commander

MCT—Maximum continuous thrust

MEL—Minimum equipment listing

MEGP—Mission essential ground personnel

MPT—Mission planning team

MMPC—Minimum mission planning crewmembers

MSL—Mean sea level

MST—Mission support team

NAF—Numbered Air Force

NAV/DSO—Navigator/defense system officer

nm—Nautical mile

NOTAM—Notice to airmen

OCR—Office of collateral responsibility

OG—Operations group

OGV—Operations group standardization and evaluation

OPR—Office of primary responsibility

OSI—Office of Special Investigation

PIC—Pilot in command

PL—Protection level

PME—Primary mission equipment

P-Sortie—Pilot proficiency sortie

RAP—Ready aircrew program

RCR—Runway condition report

RNAV—Area navigation

R&R—Recovery and reconstitution

RVR—Runway visual range

SCDL—Surveillance control data link

SD—Senior director

SEFE—Standardization/evaluation flight examiner

SEFTOC—Simulated engine failure takeoff continued

SF—Security forces

SII—Special interest item

SMO—Sensor management officer

SOF—Supervisor of flying

SQ—Squadron

TAAD—Tactical arrivals and departures

UP—Unqualified pilot

US—United States

USAF—United States Air Force

V1—Decision speed

VMC—Visual meteorological conditions

VVI—Vertical velocity indicator

WST—Weapon system trainer

Attachment 2

SAMPLE MISSION SUMMARY BRIEFING GUIDE

A2.1. Mission Administration:

A2.1.1. Date of flight/mission number

A2.1.2. Tail number

A2.1.3. Aircraft maintenance status

A2.1.4. Aircraft commander/mission crew commander

A2.1.5. FCIF/SIIs

A2.1.6. Go/No-Go Criteria

A2.2. Mission Timing:

A2.2.1. Show times

A2.2.2. Takeoff

A2.2.3. ARCT

A2.2.4. On/Off station

A2.2.5. Landing

A2.3. Weather Forecast:

A2.3.1. Takeoff

A2.3.2. Enroute

A2.3.3. Air Refueling

A2.3.4. Orbit Area

A2.3.5. Landing

A2.4. Mission Profile:

A2.4.1. Profile

A2.4.2. Orbit location

A2.4.3. HVAA/self-defense

A2.5. Mission Information:

A2.5.1. Objectives/Overview

A2.5.2. Taskings/Activity Timeline

A2.5.3. C2 Units/Call signs

A2.6. Emergency Duties:

A2.6.1. Use of nets

A2.6.2. Egress routes

A2.7. Flight Risk Assessment Worksheet. If applicable.

Attachment 3

E-8 PASSENGER BRIEFING GUIDE

A3.1. General

A3.1.1. AC/MCC name

A3.1.2. Mission duration/ETA at destination

A3.1.3. Passenger on/off-load procedures

A3.2. Emergency Signals:

A3.2.1. Ground Evacuation:

A3.2.1.1. Signal for evacuation

A3.2.1.2. Primary/secondary exits

A3.2.1.3. Escape slides

A3.2.1.4. Assembly areas

A3.2.2. Crash Landing/Ditching:

A3.2.2.1. Signal for preparation/ Signal for brace for impact

A3.2.3. Loss of Pressure:

A3.2.3.1. Signal/ Oxygen requirements

A3.3. Oxygen/Survival Equipment:

A3.3.1. Assigned oxygen source--how to check/use system

A3.3.2. Walk around bottles (location, use, refill stations, procedures)

A3.3.3. LPUs--fitting and use (if applicable)

A3.4. Restrictions/Warnings:

A3.4.1. Smoking

A3.4.2. Lavatory

A3.4.3. Seat belts

A3.4.4. Bunks

A3.4.5. Electronic devices (IAW AFI 11-202V3)

A3.5. Miscellaneous:

A3.5.1. Coffee/meals/oven/water

A3.5.2. Noise protection

A3.5.3. Follow crewmember instructions

A3.5.4. Brief passengers on any emergency drill

A3.5.5. Transport of Drugs

A3.5.6. FOD Hazards

Attachment 4

IC 2003-1 TO AFI 11-2E-8 VOLUME 3 – E-8 OPERATIONS PROCEDURES

12 DECEMBER 2003

SUMMARY OF REVISIONS

This revision incorporates Interim Change IC 2003-1. This Interim Change (IC) updates **Paragraph 3.4.1.1.** minimum crew rest to apply to deployment/redeployment missions only. Paragraph **3.9.** Flying Clothing added gloves to taxi and ERCC procedures. **Paragraph 4.3.8. Multiple Full Stop Landings** incorporates ACC/DO brake energy waiver from 10 million ft-lbs to 40 million ft-lbs. **4.3.10 Aircraft Category** added. First Pilot (FP) restrictions were added to **paragraphs 4.4.2.2.** and **4.7.1.**. **Paragraph 4.5.4. through 4.5.8.** adds **RNP 10/BRNAV procedures**. **Paragraphs 4.5.9. through 4.5.12.** add **RVSM procedures**. **Table 4.1.** is replaced, incorporating guidance for AC touch and go's, copilot AR, FP restrictions, and removing crosswind restrictions from SEFTOCs and low approaches. **Paragraph 4.12. Formation Restrictions** is reworded for clarity. A "|" indicates revised material since the last edition.

OPR: HQ ACC/DOYA (Maj Mark Burnette)

3.4.1.1. Due to the long flights and numerous time zone changes involved in flying to and from overseas locations, ground time between landing and subsequent takeoff will not be planned for less than 18 hours, unless waived by OG/CC or equivalent. This ground time does not apply to "Op Stops" made within an aircrew duty period.

3.9. Flying Clothing. Minimum requirements will be determined IAW AFI 11-301, *Aircrew Life Support (ALS) Program*. All crewmembers will wear nomex flying gloves during engine start, taxi, takeoff, landing, ERCC, and when performing emergency procedures. Flight gloves may be removed when they hinder completion of required duties.

4.3.8. Multiple Full Stop Landings. The FE will determine the brake energy used during landing and then using the decision speed (V1), without headwind correction, determine the brake energy for an abort during a subsequent takeoff. Do not takeoff until the combined energy after ground cooling is less than 40 million ft-lbs. If takeoff is made with brake energy above 10 million ft-lbs., air-cooling procedures will be followed.

4.3.10. Aircraft Category. The E-8 is a category D aircraft. Some landing configurations and gross weight combinations will require the use of category E minimums. Refer to Flip GP for guidance.

4.4.2.2. FP's will not be designated as PIC. However, they may occupy the left seat without IP supervision.

4.5.4. Required Navigation Performance (RNP Airspace). Airspace where RNP is applied is considered special qualification airspace. The E-8 is approved for operation in RNP airspace with operational limitations based on navigational equipment.

4.5.4.1. RNP-10 compliance includes navigation accuracy within 10 NM of actual position 95 percent of the time. The E-8 may operate in RNP-10 airspace when the following conditions are met:

4.5.4.1.1. The "INU-only" navigation mode is selected for the steering solution. Other Navigation Modes may not be used for operations in RNP-10 airspace.

4.5.4.1.2. Updates will be IAW RNP/BRNAV update and contingency procedures in this volume.

4.5.5. Basic Area Navigation (BRNAV) and RNP-5 Airspace. Compliance includes navigation accuracy within 5NM of actual position 95 percent of the time. BRNAV navigation accuracy criteria is RNP-5. Aircraft may operate in BRNAV/RNP-5 airspace when the following conditions are met:

4.5.5.1. The "INU-only" or the INU with manual in-flight updating or point to point navigation using the flight management system (FMS) shall be the only navigation modes used for operations in BRNAV airspace.

4.5.5.2. Should NAVAIDS become unavailable, either through radio failure or denial, the "INU-only" solution cannot be used longer than 7.5 hours from the time the INUs were commanded to the NAV mode or the last update, whichever is later. Refer to RNP-10/BRNAV Update and Contingency Procedures in this volume.

4.5.5.3. Updates will be IAW RNP/BRNAV update and contingency procedures in this volume.

4.5.6 RNP-10/BRNAV Update and Contingency Procedures.

4.5.6.1. Aircraft must exit RNP-10/BRNAV airspace 7.5 hours after the INU systems were placed in NAV mode after either a full gyrocompass ground alignment or an in-flight update.

4.5.6.2 An in-flight update may be conducted on one INU at a time within coverage of an FAA/CAA approved radio-NAVAID.

4.5.6.3. The resulting update must provide a position that agrees with the position provided by the radio-NAVAID plus or minus 0.3 NM.

4.5.6.4. After the first INU successfully completes an in-flight update and its position accuracy is verified, the second INU may be updated and its position compared to the first INU, or the radio-NAVAID.

4.5.7. RNP/BRNAV Flight Planning. The PIC will review airspace requirements (i.e. specific RNP level and contingency actions, etc), verify the aircraft is approved for RNP/BRNAV operation, and assess mission impact when flying in RNP-10/BRNAV airspace.

4.5.7.1. Enroute. Both INUs must be operational at the RNP-10/BRNAV entry point. Periodic crosschecks will be accomplished to identify navigation errors and prevent inadvertent deviation from ATC cleared routes. Advise ATC of the deterioration or failure of navigation equipment below navigation performance requirements and coordinate appropriate actions.

4.5.8. Post Flight. Document in AFTO Form 781 malfunctions or failures of RNP/BRNAV required equipment, including the failure of this equipment to meet RNP/BRNAV tolerances.

4.5.9. Reduced Vertical Separation Minimum (RVSM) Airspace. Airspace where RVSM is applied is considered special qualification airspace. Both the aircrew and the specific aircraft must be approved for operations in these areas. These specific E-8's are approved for unrestricted use in the full RVSM envelope. Refer to FLIP GP and the following guidance for RVSM requirements:

4.5.10. RVSM Equipment. Both primary altimeters, the autopilot (to include the altitude hold function), the altitude alerter, and the IFF transponder must be fully operational before entry into RVSM airspace. Should any of this equipment fail before entering RVSM airspace, request a new clearance so as to avoid this airspace.

4.5.10.1. Autopilot. The autopilot shall be engaged during level cruise except when circumstances such as the need to re-trim the aircraft or turbulence procedures require disengagement.

4.5.10.2. Altimeters. Crosscheck the altimeters (STBY to RESET) before or immediately upon entry to RVSM airspace. The PIC will ensure that readings of all altimeters are recorded and retained for use in contingency situations.

4.5.10.3. Should any of the required equipment fail after entry into RVSM airspace, immediately notify ATC and coordinate a plan of action.

4.5.11. RVSM Operations. Continuously monitor systems and crosscheck altimeters to ensure they agree ± 200 ft.

4.5.11.1. Aircrews should limit climb and descent rates to 1,000 feet per minute when operating in the vicinity of other aircraft to reduce potential effects on TCAS operations.

4.5.12 Post Flight. Document (in the AFTO Forms 781) malfunctions or failures of RVSM required equipment, including the failure of this equipment to meet RVSM tolerances.

4.7.1. First Pilot (FP) Restrictions. FP's will comply with AC restrictions. Exception: Items identified by the OG/CC during initial placement in FP status will not be accomplished without IP supervision.

Table 4.1. Maneuvers Authorized for Qualification and Continuation Training.

MANEUVER	POSITION	RESTRICTIONS
Touch-and-Go	IP/AC/CP	1, 2, 5, 7, 8, 18
Approach and Landing, Sim Engine Out	IP/AC	3, 6, 7, 8, 9, 10, 16, 18
Approach and Go Around, Sim Engine Out	IP/AC	3, 7, 8, 9, 10, 15, 16
Tactical Arrivals and Departures (TAAD)	IP/AC	4
Air Refueling Envelope Limits Demo	IP/D	13
SEFTOC	IP/D	3, 7, 8, 9, 11, 15, 16
Spoiler/Lateral Control Demo	IP/D	12, 15
Unusual Attitude Recoveries	IP/D	9, 7, 12, 15, 16, 17
14/25 Flap Touch-and-Go	IP/D	1, 7, 8, 18
Landing Attitude Demonstration	IP/D	1, 7, 8, 14, 18
Copilot Air Refueling	CP	5

KEY:

IP/AC – Instructor Pilot or Aircraft Commander

IP/D – Direct IP supervision is required (IP at the controls)

CP- Copilot

RESTRICTIONS:

1. IP: 200 / ½, 2400 RVR or lowest suitable approach minimums, whichever is higher, RCR of 10 or greater (precipitation not moderate to heavy). Runway must be free of snow, ice slush, and standing water (no RSC).

2. AC/CP: Day, 1000/3, RCR 23, home station only. Airfields other than home station require SQ/CC approval.

3. Day: Circling Minimums. Night: 1000/2 or circling minimums, whichever is higher.

4. Wx: 5000/3; Certified on Letter of X's.

5. IAW AFI 11-2E-8 Volume 1, Chapter 7

6. Flaps 40 or 50 only. IP- Simulated three-engine touch, four engine go permitted. AC Simulated three-engine full-stop only.

7. No passengers aboard (see AFI 11-401 and MAJCOM supplement).

8. 9,000' x 135' or minimum runway length and width required to make a safe, normal, full-stop landing, whichever is higher. Gross Weight 247,000 lbs. or less.

9. IP/AC must make public address call prior to initiating. If multiple maneuvers are to be accomplished, one public address call is sufficient for the series.

10. Initiate planned go-around at DH (if applicable) or 200 feet AGL, whichever is higher. If an unplanned go-around or missed approach is required, symmetrical thrust on all four engines will be used as soon as practical.

11. Do not retard the throttle for SEFTOC prior to reaching 200’ AGL minimum.

12. Inflight requirements: IP must be at flight controls. Initiated and completed above

10,000 feet AGL. Aircraft must maintain day/VMC conditions. Bank angle will not exceed 30 degrees; pitch attitude will not exceed 15 degrees high or low. Compute MCT prior to initiating maneuver.

13. IP must be at a set of flight controls. Tanker must have positive boom disconnect

capability. Limits are as follows:

Left/Right—8 degrees (KC-135); 18 degrees (KC-10)

Up/Down—22 and 38 respectively

In/Out— 8/16 (KC-135); 19 feet extension (KC-10)

14. Four engine only. Normally notify the SOF of intentions. Initiate go around no less than 3000 ft of runway remaining.

15. WST is primary for accomplishment.

16. No minimum essential ground personnel (MEGP) onboard.

17. Not permitted during spouse orientation flights.

18. Maximum Crosswind – 15 knots (IP), 10 knots (AC/CP).

4.12. Formation Restrictions. E-8 will not fly in formation with other heavy aircraft for purposes other than air refueling.