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Flying Operations

E-3 OPERATIONS PROCEDURES

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This volume establishes effective and safe operations of the E-3 Airborne Warning and Control System (AWACS) and implements AFPD 11-2, *Aircraft Rules and Procedures*; and is consistent with AFPD 11-4, *Aviation Service*; and AFI 11-202V3, *General Flight Rules*. It applies to all E-3 units including Air Force Reserve Command (AFRC) Units. See **paragraph 1.3** for waiver authority guidance. This publication does not apply to the Air National Guard (ANG). MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to AFFSA/XOF, through ACC/A3CA, for approval prior to publication in accordance with (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 ACC/A3CA, 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 volume to their parent MAJCOM/DRU/FOA office of primary responsibility (OPR) 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 33-360, *Publications and Forms Management Program*. Send comments for change and suggested improvements to this volume on an AF Form 847, *Recommendation for Change of Publication*, through approved MAJCOM channels to ACC/A3CA. Forward approved recommendations to ACC/A3CA. AF/A3 is the approval authority for changes to this instruction. 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 the Air Force Records Disposition Schedule (RDS) in the Air Force Records Information Management System (AFRIMS).

This publication requires the collection and or maintenance of information protected by the Title 5 United States Code (USC) Section 552a, *The Privacy Act of 1974*, authorized by 37 USC § 301a, *Incentive Pay: aviation career*; Public Law (PL) 92-204, *Appropriations Act for 1973*; PL 93-570 § 715, *Appropriations Act for 1974*; PL 93-294, *Aviation Career Incentive Act of 1974*; DOD Instruction 7730.57, *Aviation Incentive Pays and Continuation Bonus Program*; and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*. The applicable SORN, F011 AF XO A, *Aviation Resource Management Systems (ARMS)*, is available at: **http://dpcld.defense.gov/Privacy/SORNsSearchResults/tabid/7541/Category/277/Default.aspx**.

SUMMARY OF CHANGES

This volume has been substantially revised and must be completely reviewed. These changes were made reorganize and clarify operating procedures and align guidance with the recently-revised AFI 11-202V3. Major changes include the following: Waiver authority guidance has been revised to comply with Tier Waiver Authority guidance. Block 40/45 nomenclature and crew member designations/responsibilities have been changed throughout. Crew report time guidance has been revised. On station procedures and aircraft position monitoring guidance has been updated. The Navigator's enroute navigation responsibilities have changed. Radar quality criteria have been updated. Readiness Posture definitions have been clarified. Guidance concerning flight glove wear has been changed. Low-RCR towing guidance now incorporates verbiage from ACC waiver 14-01. Flight deck guidance concerning the performance of touch-and-go landings on runways contaminated with snow, ice, and slush has been revised. VFR departure guidance has been revised. On-station weather-monitoring guidelines have been altered. Flight Engineer ground refueling guidance has been clarified. Multiple additional changes were incorporated and require the user to review their specific areas.

Chapter 1

GENERAL INFORMATION

1.1. Aircrew Responsibility. This volume, in conjunction with other governing directives, prescribes those procedures applicable to the operation of E-3 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.

1.2. Deviations. Deviations from these procedures require specific approval of the MAJCOM/A3 unless an urgent requirement or an aircraft emergency dictates otherwise. In that case, the Pilot in Command (PIC) will take the appropriate action to safely recover the aircraft.

1.3. Waivers. Tier waiver authorities (**T-0**, **T-1**, **T-2**, **T-3**) have been included to all mandated unit compliance items (Wing level and below) as prescribed by AFI 33-360, *Publications and Forms Management* and AFI 11-202, Volume 3, *General Flight Rules*. Forward waiver requests through appropriate channels to the MAJCOM/A3 for approval. All approvals will include an expiration date. ACC/A3TV and ACC/A3CA are Office of Collateral Responsibility (OCR) on all waiver requests to this AFI.

1.4. Distribution. Issue this volume to E-3 aircrew members IAW local procedures.

Chapter 2

MISSION PLANNING

2.1. Responsibilities. The responsibility for mission planning rests with the Aircraft Commander (AC). Preparation for mission tasking and subsequent execution is the responsibility of the Mission Crew Commander (MCC). The operations functions of the unit will support both efforts. Flying crews may perform their own mission planning or units may utilize mission planning teams or planning cells in order to meet mission planning requirements. In any case, qualified individuals will be designated to perform mission planning and/or briefings. Units will develop specific procedures to ensure all aircrew members are thoroughly prepared for each flight.

2.2. Forms and Logs. Specific flight plans, logs, and mission forms will be developed/specified by the appropriate group commander (**T-3**). Existing AF and MAJCOM forms should be used to the maximum extent possible.

2.3. Fuel Conservation. Aircrew and mission planners will manage aviation fuel as a limited commodity and precious resource. Fuel optimization will be considered throughout all phases of mission planning and execution (**T-3**). Excessive ramp and recovery fuel adds to aircraft gross weight and increases fuel consumption. Do not ferry extra fuel beyond optimum requirements for safe mission accomplishment and training objectives (**T-3**). Aircrew and mission planners will optimize flight plans and flight routing for fuel efficiency. In-flight procedures such as climb/descent profiles and power settings should also be considered for efficient fuel usage. Aircrew should employ the following aviation fuel optimization measures without compromising flight safety or jeopardizing mission/training accomplishment:

2.3.1. Optimize fuel loads. Mission plan for the required ramp and recovery fuel. Ensure ramp fuel is correct upon arrival at aircraft.

2.3.2. Minimize APU use. Use ground power units when practical.

2.3.3. Delay engine start time. Establish and implement local engines start time standards.

2.3.4. Minimize aircraft weight through optimized fuel loads and reduction of equipment not necessary to accomplish the mission.

2.3.5. Establish Command and Control (C2) and flight following procedures to ensure timely notification of mission changes/cancellations to avoid unnecessary or unproductive flight time.

2.4. Navigational Charts.

2.4.1. Annotate an appropriately scaled navigational chart with the route of flight and the following (**T-3**):

2.4.1.1. Special Use Airspace (SUA) within the altitude structure and within 50 NM of the route of flight/orbit airspace per the AFPAM 11-216.

2.4.1.2. Mission airspace/ E-3 orbit airspace with Altitude blocks. For E-3 air refueling airspace, label RVIP, RVCP, AAR Exit Point and annotate any applicable restrictions.

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

2.4.1.4. High terrain within 50 NM of the route of flight.

2.4.1.5. ADIZ boundaries within 50 NM of the route of flight.

2.4.1.6. Equal Time Point (ETP) and FIR boundaries as required.

2.4.2. Annotate an Operational Navigation Chart (ONC), or larger scale, with the planned departure/arrival airfield and the following:

2.4.2.1. Planned departure/arrival procedure.

2.4.2.2. Special Departure Procedure (SDP).

2.4.2.3. Highest terrain or obstacle along expected route of flight.

2.4.2.4. Highest terrain or obstacle within 30 NM. NOTE: Units will, if necessary, specify flight plan requirements and procedures in their local chapters to meet specialized mission requirements.

2.5. Mission Planning Requirements. The appropriate group commander may waive requirements contained in this paragraph if deemed necessary to accomplish a specific mission (**T-3**).

2.5.1. Briefings/Debriefings.

2.5.1.1. The AC/MCC will brief/debrief all crewmembers to ensure safe/effective mission accomplishment (**T-2**). Locally developed briefing guides (developed IAW AFI 11-202V3) will be used to provide a reference list of items that apply to a particular mission and will be used as the basis for mission planning and briefing actions. Brief items in any logical sequence, and those items understood by all participants may be briefed as "Standard". All aircrew members will attend these briefings unless excused by the AC/MCC or unless local procedures dictate otherwise (**T-3**). **NOTE:** Units will develop and document guidance for items that are commonly briefed as "Standard." The purpose of unit or local standards is to reduce the briefing time of administrative tasks to allow for concentration on the mission. In no case do these procedures relieve the aircrew of the responsibility to comply with USAF directives. Aircrew will use these procedures unless conditions, objectives or execution dictate the aircraft commander to brief as "non-standard."

2.5.1.2. Passengers. The AC will assign a crewmember to be responsible for passengers or distinguished visitors; reference Transportation of Passengers in **paragraph 3.12** in this instruction for minimum responsibilities (**T-3**).

2.5.1.3. Aircraft and Aircrew Status. Aircraft status will be obtained on the day of the flight from the appropriate maintenance unit including open discrepancies from the Air Force Technical Order (AFTO) Form 781A, Maintenance Discrepancy and Work Document. Aircrew status will be obtained from ARMS personnel. Aircraft and aircrew status will be briefed/addressed as appropriate.

2.5.1.4. AWO-Assisted Rendezvous. Either the AC or Nav will review the Air-to-Air Refueling (AAR) rendezvous procedures and techniques with the AWO in charge of assisting the rendezvous. The Nav will supply the AWO with the following information:

2.5.1.4.1. AAR Control Time (RVCT), AAR Initial Point (RVIP) and AAR Control Point (RVCP) coordinates in degrees LAT/LONG.

2.5.1.4.2. AAR altitudes.

2.5.1.4.3. Desired tanker offset and turn range, if necessary.

2.5.1.4.4. Range and offset calls desired during the rendezvous.

2.5.1.4.5. Any alternate procedures.

2.5.1.4.6. Transponder codes (on day of flight, if available).

2.5.1.5. AWO-Directed Rendezvous. The AWO will brief the flight deck on the AAR rendezvous procedure to be employed. The AWO will brief the following information:

2.5.1.5.1. AAR rendezvous type.

2.5.1.5.2. AAR altitude.

2.5.1.5.3. Anticipated turn ranges/direction.

2.5.1.6. Orbit Planning. The AC and Nav will coordinate with the MCC, SD, ASO, and ECO to determine optimum orbit configuration based on tasking and orbit limitations.

2.5.2. Mission Crew Planning. The following items will be accomplished during mission planning:

2.5.2.1. MCC will ensure mission activities are planned according to applicable checklists and guides.

2.5.2.2. MCC, SD, ASO, ECO, and the CSO will develop a communication plan to ensure accomplishment of mission requirements.

2.5.2.3. The CDMT/ST will coordinate all computer software requirements. Minimum software requirements will be IAW local operating procedures.

2.5.2.4. The MCC will assess impact of equipment limitations and adjust tasking as necessary. The MCC will conduct a final review of mission crew planning.

2.6. Theater Procedures Aircrew Aids. The unit specifically tasked to support an area of operations will develop theater procedure aircrew aids (classified/unclassified) and make them available to the crew upon implementation of a contingency Operations Plan (OPLAN) for deployment to the theater (**T-3**). As a minimum, these aids will include:

2.6.1. Communications plans.

2.6.2. Flight and mission crew positional actions/procedures.

2.6.3. Rules of Engagement (ROE).

2.6.4. Other information deemed necessary by the unit.

Chapter 3

AIRCREW OPERATING PROCEDURES

3.1. PIC Responsibilities. SQ/CC shall designate an AC, Instructor Pilot (IP), or Evaluator Pilot (EP) as the PIC for all flights, on a flight authorization form, IAW AFI 11-401, *Aviation Management*, and applicable supplements. The PIC is responsible for the safe, effective conduct of flight operations. The aircrew is responsible to the PIC for the successful accomplishment of all flight activities IAW AFI 11-202V3 and applicable MAJCOM supplements. PIC responsibilities and/or authority include:

3.1.1. Managing crew resources and safe mission accomplishment.

3.1.2. Welfare of the crew.

3.1.3. Final word for requesting or accepting any waivers affecting the crew or mission.

3.1.4. Ensuring that any portion of the flight affecting the accomplishment of the E-3 mission is coordinated with the MCC.

3.2. Crew Manning.

3.2.1. Minimum flight crew manning includes the AC, Copilot (CP) or FP, Nav, and Flight Engineer (FE).

3.2.2. Proficiency (P)-sorties will be flown with a minimum of five crewmembers: AC, CP, Nav, FE, and one additional crewmember to act as safety observer. The applicable Operations Group Commander (OG/CC) has the waiver authority to authorize a flight without a safety observer (**T-3**).

3.2.3. Minimum mission crew manning to power up the mission systems will include MCC, ASO, ART, CDMT/ST, CT, and CSO. Mission crew manning may vary by the type of mission flown (**T-3**).

3.2.4. Normally, aircrew manning for operational employment will be IAW AFI 65-503, US Air Force Cost and Planning Factors, Table A36-1. Mission crew manning may vary by the type of mission flown; SQ/DO or DETCO may tailor aircrew manning to meet operational requirements.

3.2.5. Unless waived by the SQ CC/DO, inexperienced CDMTs/STs will fly with an experienced CDMT/ST, and inexperienced ARTs will fly with an experienced ART, at all times, until certified experienced.

3.3. Crew Rest/Flight Duty Period (FDP)/Crew Augmentation. Crew rest, flight duty period and crew augmentation will be IAW AFI 11-202V3 and applicable MAJCOM supplements with the following additional guidance:

3.3.1. With autopilot, altitude hold, or any axis of the autopilot inoperative, limit basic FDP to 12 hours and augmented FDP to 16 hours (**T-2**).

3.3.2. Flight crew augmentation.

3.3.2.1. In addition to the normal flight crew, minimum crew augmentation will consist of a qualified AC, NAV, and FE who are current in duties that will be performed on that

sortie. Adding flight crewmembers after the first takeoff in a crew duty period is not considered augmentation.

3.3.2.2. The applicable OG/CC (or as delegated) will determine the augmented mission crew composition depending upon mission requirements (**T-3**).

3.3.3. Non-duty Time. Crewmembers will be afforded 12 hours of non-duty time after a flight before reporting for normal non-flying duties, unless waived by SQ CC/DO.

3.3.4. Crew Rest Timing. Crew rest for successive flight activity will begin when the last crewmember departs after completing related aircrew duties but not earlier than 1 hour after final landing from previous flight activity.

3.3.5. Crew Rest for Deploying/Redeploying Aircrews. When transitioning four time zones or more, unless waived by applicable operations group commander, ground time between landing and subsequent takeoff will not be planned for less than 18 hours. This does not apply to "Ops stops" made within an aircrew duty period.

3.3.6. Management of AFRC Crewmembers. The on-scene commander or E-3 DETCO is responsible for the effective management of aircrews. An element of that responsibility is the effective use of the Reserve associate aircrew personnel during their periods of availability. There is no guarantee that missions will always be completed at scheduled Mission End Time (MET). Therefore, it is incumbent upon Reserve associate crew members to make available sufficient time to accommodate unavoidable delays in returning to home station. Scheduled Return Time (SRT) will be calculated MET plus 24 hours for routine exercise and operational deployments. SRT(s) for contingencies and missions of unknown duration will be determined by the 513 ACG/CC and 552 OG/CC or the requesting authority in coordination with HQ AFRC. The SRT will be determined and placed on the initial and subsequent flight authorizations until the mission is complete. The overall objective is to recover aircrews on schedule and provide scheduling stability. Two essential elements of this concept are realistic determination of SRT(s) based on mission duration and conscientious management by the on-scene commander or DETCO to ensure return of reserve associate aircrews by the MET. Except in uncontrollable or unusual circumstances, Reserve associate crewmembers must be assured that their missions will be complete within the SRT. The Reserve associate AC and MCC will be provided a copy of all mission itinerary changes. Delays in return of Reserve associate personnel beyond their SRT will be coordinated through the 552 OG/CC, the 513 ACG/CC, and concurred with by the aircrew. Every available means will be used to return Reserve associate crewmembers to home station to meet the SRT. If Reserve associate aircrew (or members) cannot extend past the SRT, the on-scene commander will verify whether military or contract means of transportation is available. If no such means are available, the on-scene commander or DETCO will use the most expeditious means, including commercial air, to return Reserve associate personnel to home station.

3.4. Pre-Mission Duties. The AC in coordination with the MCC and DO/DETCO, may adjust crew report time to meet mission requirements. Crew report times will allow sufficient time to accomplish all preflight activities IAW locally prescribed guidance. Normally use a 3+30 hour show time prior to takeoff for sorties planned and flown on the same day, unless a Mission Planning Team (MPT) is utilized. If an MPT is utilized, the SQ/DO or MPT will set the show time. The FE and technicians (CSO/CT/CDMT/ST/ART) should arrive at the aircraft 1+30

hours prior to the scheduled takeoff time. Crew show at the aircraft for all other crewmembers will normally be no later than 1 hour prior to the scheduled takeoff time.

3.4.1. On the day of the mission, aircrew may only be scheduled for duties related to the mission, regardless of duty day.

3.5. Minimum Equipment. The 552 OG is the Combat Air Force (CAF) lead for developing and maintaining the Minimum Equipment List (MEL) for use by all AWACS units. The MEL is a guide to determine operable equipment required for safe flight. 552 OG will forward a copy of the MEL to HQ ACC/A3CA, HQ PACAF/A3T, and HQ AFRC/A3T.

3.6. Communications.

3.6.1. Required Communication. Communicate the following to the applicable command post or operations center, unless local directives or tactical deception requirements specify otherwise:

3.6.1.1. Maintenance discrepancies which will delay preflight or takeoff (AC).

3.6.1.2. Engine start time (at least 10 minutes prior to engine start to allow notification of Central Security Control (CSC) when appropriate). (AC/CP)

3.6.1.3. Anytime equipment malfunction or incident occurs that will adversely affect mission accomplishment. (AC/MCC)

3.6.1.4. Actual takeoff time. (Nav)

3.6.1.5. Significant changes in mission timing. (Nav)

3.6.1.6. Post-air refueling report. (CSO) (Optional per AC/MCC)

3.6.1.7. On station/Ops Normal time (NLT 15 minutes after arriving on station). (CSO) (Optional per AC/MCC)

3.6.1.8. Time off station (NLT 15 minutes after departing station). (CSO) (Optional per AC/MCC)

3.6.1.9. Maintenance codes and Estimated Time of Arrival (ETA) prior to final landing. (CSO)

3.6.1.10. Revised ETA (if changed by more than 15 minutes) when in UHF radio contact. (Nav)

3.6.1.11. Sortie block time and flight duration. (Nav)

3.6.2. Maintenance Codes (Aircraft Landing Status and System Capability Codes). The FE and each technician will provide the maintenance codes to the CSO prior to landing. Use the Aircraft Landing Status and System Capability Codes as defined in AFI 21-101, *Aerospace Equipment Maintenance Management*, and applicable MAJCOM supplements**.**

3.7. AWO-Assisted/Directed Rendezvous Responsibilities.

3.7.1. AWO-Assisted Rendezvous. The AWO will provide information to assist the Nav in accomplishing the rendezvous and for situational awareness. AWOs will execute the rendezvous IAW with **paragraph 2.5.1.4** of this AFI.

3.7.1.1. Communications. Internal coordination between the Nav and AWO during the rendezvous will be over Net 1. Other crewmembers should minimize use of Net 1 for 30 minutes before the AAR Control Time (ARCT) until after the refueling is complete, unless safety of flight is in jeopardy.

3.7.1.2. Procedures. The AWO will execute the pre-planned type of rendezvous as coordinated with the AC, Nav, and tanker. The AWO will pass bearing, range, and offset of the tanker as prebriefed/required. When directed by the AC, the FE will advise the AWO/MCC when to terminate mission crew assistance and when the mission systems may be configured for AAR.

3.7.2. AWO-Directed Rendezvous. The SD is primarily responsible for the success of the AWO-directed rendezvous. The AWO will brief the flight deck and the SD on the A/R rendezvous procedure to be employed. AWOs will execute the rendezvous IAW with **paragraph 2.5.1.5** of this AFI.

3.7.2.1. During Directed Rendezvous, AWOs will voice vectors, altitude changes and any other directive calls over the primary AAR frequency.

3.8. Radar Radiation Restrictions. Do not radiate the mission radar at or below transition flight level (FL) due to the potential for conflict with Visual Flight Rules (VFR) traffic that may pass closer than 650 feet vertically and 1,300 feet horizontally. However, during contingency operations, emergency situations, and special operations, the mission radar may be radiating at or below transition flight level within equipment limitations.

3.9. On-Station Procedures.

3.9.1. Navigator will notify the MCC of orbit intercept over Net 1 along with altitude, winds aloft, and any changes to planned orbit. If assuming on-station outside of the orbit, winds aloft should be briefed at this time.

3.9.2. Fly mission orbits at best endurance indicated airspeed whenever practical but not lower than maneuver speed for 30 degrees of bank.

3.10. Aircraft Position Monitoring. Aircraft position relative to a preplanned track is the responsibility of both the flight and mission crews. Aircraft position and orbit pattern changes will be coordinated between the MCC, Nav, and AC. The applicable Wing Commander (WG/CC) may waive the following requirements if deemed necessary to accomplish a specific mission.

3.10.1. Flight Crew Procedures:

3.10.1.1. Pilots will monitor the E-3 position via Global Positioning System Integrated Navigation System (GINS) and radio navigation aids (when within range). The AC will ensure separate steering solutions are selected on the AC and CP Control Display Units (CDU).

3.10.1.2. The Nav, in coordination with the AC, will establish a radio navigation fix or line of position between the closest point of the E-3 orbit and the threat area as a “no fly beyond line” for all E-3 orbits. This information will be passed to the MCC.

3.10.1.3. The AC, CP, and Nav positions will be occupied, except for periods of crew relief, during flights within 25 NM of an established prohibited area or within 50 NM of a potentially hostile border.

3.10.1.4. When flying in Warning Areas, Military Operating Areas, Restricted Areas, or Air Traffic Control (ATC) assigned working areas with other aircraft, the AC and MCC are responsible to ensure safe separation between the E-3 and other aircraft

3.10.2. Mission Crew Procedures:

3.10.2.1. The MCC must have at least a stand-behind position at an operational console, with access to monitor coordination and safety frequencies as required by the mission.

3.10.2.2. The AWACS monitor and MCC must maintain awareness of the E-3's position and altitude. Their consoles must display the AWACS DATA LINK net participant symbol and they must have a means to determine E-3 altitude for deconfliction purposes. E-3G crew members will use E-3 Mode C pressure altitude information when making AWACS monitor calls. It is acceptable for the MCC to momentarily have the AWACS DATA LINK net participant symbol not visible on their console, but it should not be for an extended period of time. If the accuracy of the E-3 symbol is in doubt, consider worst case location, and coordinate with the flight deck to take immediate action to reposition the aircraft in order to avoid the prohibited/threat areas.

3.11. AWACS Monitor.

3.11.1. During flight under Due Regard when the mission radar or Identification, Friend or Foe (IFF) is operating, the MCC will designate an AWACS monitor to provide traffic advisories to the flight crew. At any other time, an AWACS monitor may be utilized as determined by the PIC. The AWACS monitor will notify the flight crew and MCC when AWACS monitor assumes monitor duties, notify the MCC when monitor responsibility changes sections, and notify both the flight crew and MCC whenever AWACS monitor is terminated and should provide a brief explanation for the reason of termination. The MCC is ultimately responsible for ensuring that there is an AWACS monitor available. Normally, the AWO providing AWO-Assisted AR Rendezvous or AWO-Directed AR Rendezvous will also perform AWACS monitor responsibilities.

3.11.2. The AWACS monitor will pass track information with the following parameters or as modified by the PIC:

3.11.2.1. For ATC-controlled airspace**:** Tracks that are within ±1,000 feet (IFF Mode C) or 3,000 feet radar measured of E-3 altitude and 15 miles from the E-3, if the track is on a heading towards the E-3, overtaking, or passing in front of the E-3.

3.11.2.2. For uncontrolled airspace: Tracks which are within ±3,000 feet of E-3 altitude and 15 miles from the E-3, if the track is on a heading towards the E-3, overtaking, or passing in front of the E-3.

3.11.2.3. Traffic advisories will include any climbing/descending and/or maneuvering aircraft which could pose a threat to the E-3.

3.11.3. Pass the tracks to the flight crew over Net 1 giving magnetic bearing (rounded to the nearest 10 degrees) Note: To increase situational awareness and promote radio communication deconfliction, AWACS monitor should monitor ATC frequency. Range,

altitude, crossing information about the traffic and whether the track altitude is radar measured or IFF reported.

3.12. Transportation of Passengers.

3.12.1. Space-A Passengers. Space-A passengers will not normally fly on the E-3 due to mission and training requirements (**T-3**).

3.12.2. Responsibility. The crewmember(s) designated by the AC to be responsible for passengers or distinguished visitors will:

3.12.2.1. Supervise passenger movement, especially on the flight line.

3.12.2.2. Assist passengers in locating assigned seats.

3.12.2.3. Assist in familiarizing passengers with aircraft interior and survival equipment.

3.12.2.4. Brief all passengers according to AFI 11-202V3 (using **Attachment 3** of this publication), prior to engine start.

3.12.2.5. Assist and direct passengers in the event of an aircraft emergency.

3.12.3. Loading/Off-loading:

3.12.3.1. When appropriate, engines on the left side of the aircraft can be shut down and an aircrew member will be positioned at the bottom of the steps to direct loading/off-loading operations prior to any passengers entering or departing the aircraft.

3.12.3.2. If only the left engines are shutdown, the TAXI BACK or an approved checklist for the given situation may be used.

3.12.4. Passenger Comfort. Pilots should make every effort to enhance the comfort of passengers. Flight operations should be planned for the minimum use of drag devices and maneuvers which might cause discomfort or apprehension.

3.13. Debriefings.

3.13.1. Conduct the maintenance debriefing as soon as practical after engine shutdown. The AC, MCC, FE, ART, CDMT/ST, CT, and any crewmember making an entry in the AFTO Form 781A, *Maintenance Discrepancy and Work Document*, will attend.

3.13.2. If required, conduct an intelligence debriefing.

3.13.3. Conduct a crew debriefing.

3.14. Flying Clothing/Equipment.

3.14.1. All aircrew members will wear or carry the minimum items of clothing and equipment according to AFI 11-301V1, AFI 36-3103, AFI 11-202V3, AFOSHSTD 48-20, AFOSHSTD 91-100 (**T-1**). The wear of flight gloves will be IAW AFI 11-301 and MAJCOM/local supplements. (**T-1**)

3.14.2. Keep equipment clear of all entry doors, hatches and all emergency equipment during all ground and flight operations. The FE, CSO, and ART will ensure that these areas are clear of obstructions during their preflight inspection. It is the responsibility of each crewmember to store/secure their personal and professional equipment carried onboard.

Excess personal and professional gear should be secured in the J-compartment (or as directed).

3.15. Aircraft Security at Enroute Stops/Destination.

3.15.1. The AC is responsible for ensuring aircraft security at enroute stops. Secure the aircraft as a Protection Level 2 resource IAW AFI 31-101, *The Air Force Installation Security Program*, as supplemented by MAJCOM. This requires a US entry controller (at least one per every two aircraft) and restricted access. Provide a copy of the flight orders and passenger manifest (as applicable) to the entry controller as a way to identify persons authorized entry to the aircraft as well as those crewmembers designated by the AC to have escort privileges. Perimeter patrol can be accomplished by host nation security, but the entry controller must be US security personnel or a US E-3 crewmember. In addition, equipment classified as SECRET (that cannot be removed from the aircraft) must be safeguarded by US security personnel or a US E-3 crewmember. Only the AC may release security forces from guarding the aircraft. Waiver authority is the appropriate WG/CC.

3.15.2. The MCC, or AC if an MCC is not available, is responsible for the security of classified mission documents and software. While deployed or during enroute stops, COMSEC and software can be stored on the aircraft when U.S. security personnel are used as the entry controller. In the event of a stop at a location where no U.S. security personnel are available, COMSEC will be stored in the Command Post or the MCC/AC will designate crewmember(s) to remain with the software and COMSEC to provide security.

3.16. Personal Publications Requirements. Personal Publications Requirements. Local units will issue each crewmember publications IAW AFI 11-215, *USAF Flight Manuals Program* as supplemented. See local supplement to this publication for requirements listing. MAJCOMs may authorize the use of electronic publications through supplements to this AFI.

3.17. Aircraft Recall/Diversion. Unless received over secure communications, challenge any recall or diversion of an E-3 using the appropriate authentication for the theater of operation. Psorties do not require authentication.

3.18. Transition Training.

3.18.1. Do not conduct transition when scheduled takeoff or final landing is between 2400L and 0600L without SQ/DO approval (**T-3**).

3.18.2. When performing transition with mission crew on board, the total transition time will not exceed 2+30 hours, with the exception of CTs/CSOs on P-sorties. However, do not conduct more than 1+30 hours at one time without SQ/DO approval (**T-3**).

3.18.3. Aircrews may conduct off-station transition if airfield was included in the mission planning conducted prior to flight and approval was obtained by SQ/DO (or higher authority) (**T-3**).

3.18.3.1. Aircrew may “drop-in” to airfields designated as “familiar” in local supplements without pre-flight mission planning/approval. The PIC will ensure current NOTAMS are reviewed, be familiar with the airfield, and coordinate with SQ/DO (or higher authority) prior to commencing descent to the airfield (**T-3**).

3.18.4. Transition duty day is a period of 12 hours that starts and runs concurrently with the maximum flight duty period and applies to all flight deck crewmembers. Transition may be

accomplished with additional crewmembers onboard that have exceeded transition duty day provided they are not occupying their primary flight crew duty position or performing flight crew instructor or Stan Eval Flight Examiner (SEFE) duties (**T-2**).

3.18.4.1. The OG/CC can approve requests to extend transition duty day to 16 hours. 513 ACG may perform transition training on local training missions provided duty day does not exceed 16 hours and actual flying time does not exceed 12 hours (**T-3**).

3.19. Crew Coordination Drills. Thoroughly plan, brief and practice simulated crew coordination drills (i.e. Ditching, Crash Landing, Loss of Pressurization, Nuclear Event, Smoke or Fumes, and Fuselage Fire drills) during each training sortie when mission profile allows. The following procedures apply:

3.19.1. The AC and MCC will coordinate prior to initiation, and make every effort to inform all instructors and evaluators of crew coordination drill timing in order to maximize training.

3.19.2. Operational requirements will not be interrupted.

3.19.3. Doors and hatches will not be opened and equipment will not be powered down. However, if a simulated crew coordination drill is performed after calling "off station," a normal equipment power down may be incorporated into the drill in anticipation of landing the aircraft.

3.19.4. If passengers are onboard during the drill, passengers will be briefed but will not participate.

3.19.5. The AC will make a Public Address (PA) announcement at the start of the crew coordination drill vulnerability period, upon execution of the drill, and at the conclusion of the drill.

3.20. Aircraft Cleanliness. It is the AC and MCC's responsibility to ensure the aircraft is clean and orderly after a mission. All crewmembers are responsible for removing or stowing their personal and professional items prior to departing the aircraft.

3.21. Aircraft Configuration for Static Display. Whenever an E-3 is on static display and opened for viewing, there will be a passenger stand at each open door. Hatches will only be opened when an aircrew member is positioned at the hatch. ACs will ensure proper safety/security precautions are taken to protect the aircraft, passengers and crew. AFI 11-209 and command supplements concerning participation in static displays and aerial events provide further guidance.

3.22. Readiness Postures.

3.22.1. Readiness Posture One (RP-1) denotes an aircraft and crew capable of launching in 1 hour from notification. Crews designated for RP-1 alert duty should normally be housed in a designated alert facility. 12 hours of pre-alert crew rest is required prior to assuming RP-1 alert (**T-2**).

3.22.2. Readiness Posture Three (RP-3) denotes an aircraft and crew capable of launching in 3 hours from notification. 12 hours of pre-alert crew rest is required prior to assuming RP-3 alert (**T-2**).

3.22.3. Readiness Posture Fifteen (RP-15) is not an alert status, but denotes an aircraft and crew capable of launching 15 hours after notification. The RP-15 crew will be present for

normal duty each day and carry pagers and/or cell phones for notification. Crew rest begins at notification.

3.23. Maximum flight duty period for RP-1, RP-3.

3.23.1. Maximum flight duty period for RP-1 and RP-3 crews is 12 hours (16 hours for augmented crews) (**T-2**). RP-1/RP-3 flight duty period extensions will be IAW MAJCOM Supplement to AFI 11-202V3.

3.23.2. Alert duty scheduling, flight duty on alert, and maximum number of days on alert will be IAW MAJCOM Sup to AFI 11-202V3.

3.24. Post-Alert Compensation Time.

3.24.1. If alert duty is performed away from normal quarters (e.g. alert facility or billeting) for a period of 96 hours or more, compensation time off will be 1 day for every 4 days on alert duty, unless waived by the applicable group commander or designated representative (**T-3**).

3.24.2. No compensatory time is authorized if alert duty was performed in normal quarters.

Chapter 4

FLIGHT CREW OPERATING PROCEDURES

4.1. Adverse Weather. Refer to AFH 11-203, Volumes 1 and 2, *Weather for Aircrews*, for familiarization with weather, weather services, and products.

4.1.1. Icing Restrictions. Flight into areas of forecast or reported severe icing is prohibited (**T-2**). Prolonged operation, such as cruise flight or holding, in areas of moderate icing should be avoided. When freezing fog, freezing drizzle, or freezing rain is forecast or reported, aircrew will confirm with supporting weather personnel the intensity and type of icing associated with the freezing precipitation.

4.1.1.1. Do not takeoff under conditions of freezing precipitation as defined by AFI11-202V3 (**T-2**).

4.1.1.2. Freezing/frozen precipitation (freezing rain, drizzle, snow, fog, or temperatures near 0o C, etc.) may cause ice or frost to accumulate on aircraft surfaces. When an aircraft requires deicing/anti-icing prior to takeoff, refer to the following:

4.1.1.2.1. Flight crew will be familiar with and follow all procedures and restrictions in T.O. 1E-3A-1, *Flight Manual* and T.O. 1E-3A-1-1, *Performance Manual*, with respect to deice/anti-ice procedures. Further guidance is provided in T.O. 42C-1-2, *Aircraft Anti-icing Procedures.*

4.1.1.2.2. MIL-A-8243 Type I and Type II de-icing fluids do not provide any anti-icing benefit, and therefore do not have holdover times. As a guide, for approved anti-icing fluids, crews may use published anti-icing holdover times IAW T.O. 42C-1-2 and winter season holdover tables available on the AFFSA website. **Caution:** The guidelines may not be consistent with Federally-approved weather intensity definitions used by qualified National Weather Service, FAA or AF weather personnel in developing forecasts or official weather observation reporting.

4.1.1.2.2.1. The holdover time begins when anti-icing fluid is first applied and is affected by intensity/type of precipitation, time, temperature, and type/dilution of mixture. PIC shall use this information to determine when holdover time is exceeded and re-apply fluid if required.

4.1.1.2.3. The PIC will ensure the following information (4-element code) is received from the deicing ground crew after anti-icing is complete:

4.1.1.2.3.1. **Element A**. Element A specifies the type of anti-icing fluid (e.g. Type IV).

4.1.1.2.3.2. **Element B**. Element B specifies the percentage of fluid within the fluid/water mixture (e.g. 75/25 is 75% fluid and 25% water).

4.1.1.2.3.3. **Element C.** Element C specifies the time of the beginning of the anti-icing step. All holdover times are based on this value. All times are based on Local (L) time.

4.1.1.2.3.4. **Element D.** Element D specifies the date (day, written month, year).

The date will be consistent with local time.

4.1.1.2.4. In all cases, PICs will ensure a visual inspection is completed within 5 minutes of departure.

4.1.2. Turbulence Restrictions. Flight into areas of forecast or reported severe turbulence is prohibited (**T-2**). Every effort will be made to avoid areas of reported moderate turbulence. If moderate turbulence is forecast along the planned route of flight, the AC will coordinate with weather personnel as to the best course of action to vacate the condition, if encountered.

4.1.2.1. Crews will confirm, if possible, the type of aircraft the forecast turbulence applies to, or what type of aircraft reported the encounter, to gain a more accurate picture of the route of flight.

4.1.2.2. The PIC is responsible for ensuring all aircrew/passengers are seated, with seat belts fastened, when areas of moderate or greater turbulence are encountered or anticipated.

4.1.3. Thunderstorm Avoidance. Pilots will neither file a flight plan nor fly into an area of known or forecasted thunderstorm activity when the weather radar is inoperative or unusable and thunderstorm activity cannot be visually circumnavigated (**T-2**). During flight, avoid thunderstorms by at least:

4.1.3.1. 20 NM at or above FL 230.

4.1.3.2. 10 NM below FL 230.

4.1.3.3. In the vicinity of the airport, maintain at least 5 NM separation from heavy rain showers. **Note:** Approaches or departures may be authorized by the appropriate group commander if thunderstorms are officially observed to be closer than 10 NM (but not less than 5 NM) from the airport. IAW AFI 11-202V3, the thunderstorm must not be producing any hazardous conditions (such as hail, lightning, strong winds, gust fronts, heavy rain, wind shear, or microburst) at the airport, and must not be forecast or observed to be moving in the direction of the route of flight (to include the planned missed approach corridor, if applicable) (**T-2**).

4.1.4. Lightning Avoidance. The following conditions are most conducive to lightning strikes and prolonged flight in them should be avoided:

4.1.4.1. Within ± 8oC or ± 5,000 feet of the freezing level.

4.1.4.2. In clouds or in any intensity of precipitation or turbulence associated with thunderstorm activity.

4.1.5. Destination Requirements (for filing purposes). An alternate will be filed if forecast destination weather does not satisfy AFI 11-202V3 requirements and/or forecast surface winds (intermittent or prevailing) exceed appropriate RCR limits.

4.2. Takeoff and Landing Data (TOLD)/Restrictions.

4.2.1. A Flight Engineer will compute all initial takeoff and landing data during mission planning utilizing an authorized TOLD computer program or T.O. 1E-3A-1-1. A Pilot or additional Flight Engineer will crosscheck this data using the computer program or T.O. 1E-

3A-1-1. Either the initial computation or crosscheck of TOLD data will be done using the T.O. 1E-3A-1-1 or FPS.

4.2.1.1. The applicable group commander may authorize use of Mission Accomplishment Planning Methods, IAW T.O. 1E-3A-1-1, when operational/contingency missions dictate (**T-3**).

4.2.2. Rolling Takeoffs. Rolling takeoffs are authorized (and with a crosswind component above 20 knots required) IAW T.O. 1E-3A-1. Make rolling takeoffs whenever appropriate.

4.2.3. Reduced Power Takeoffs. The following information is provided in addition to that found in T.O. 1E-3A-1-1:

4.2.3.1. Whenever practical, a reduced power takeoff should be made.

4.2.3.2. Actual inboard takeoff rated thrust (TRT) will be displayed on the inboard exhaust pressure ratio (EPR) bugs for quick reference in the event TRT is required.

4.2.3.3. Reduced thrust takeoffs may be accomplished on a wet runway IAW T.O. 1E-3A-1 and T.O. 1E-3A-1-1.

4.2.3.4. Reduced thrust takeoffs are permitted with falling precipitation provided precipitation is not moderate to heavy.

4.2.4. Tailwind Takeoffs. Takeoffs with tailwinds are not recommended unless required by operational considerations. If a tailwind takeoff is made, a maximum component of 10 knots may exist provided data does not exceed allowable T.O. 1E-3A-1-1 limits.

4.2.5. Crosswind.

4.2.5.1. Unless further restricted by aircraft gross weight or emergency conditions, the maximum crosswind component (gust included) for takeoff and landing with RCR 26/23 is 25 knots, RCR 15 is 20 knots, RCR 10 is 15 knots. If RCR falls between the above RCR values, use next lower RCR restrictions. Operation at higher crosswind values requires specific approval by applicable group commander.

4.2.5.2. Copilots are limited to a maximum takeoff/landing component of 15 knots unless under IP/SEFE supervision.

4.2.6. Runway and Taxiway. IAW MAJCOM directives, minimum runway length and width for takeoff or landing is 7,000 x 135 feet unless waived by OG/CC. Minimum taxiway width is 75 feet unless waived by OG/CC.

4.2.6.1. Aircraft will normally takeoff and land on the longest suitable runway available.

4.2.6.2. Intersection takeoffs are not recommended and will not be performed unless operational necessity dictates. In such a situation, follow MAJCOM directives.

4.2.7. Runway Condition Reading (RCR). Aircraft will not takeoff or land when reported RCR is less than 10. The applicable OG/CC has the authority to waive the minimum RCR to 7 when operational necessity warrants (**T-3**). Do not taxi with an RCR less than 7 (**T-2**). In cases of an unknown RCR or RCR less than 7, E-3 maintenance personnel are authorized to tow the E-3 with crew onboard to an area of known RCR of 7 or greater. E-3 Maintenance personnel will comply with current 91-203 restrictions by complying with ORM assessment and approval requirements.

4.2.8. Noise Abatement. IAW T.O. 1E-3A-1 and T.O. 1E-3A-1-1 guidance. An engine failure or other emergency condition during takeoff is a non-normal condition and takes precedence over published noise abatement procedures.

4.2.9. Landings. Except in emergency situations, the following apply:

4.2.9.1. Computed landing distance plus 1,000 feet must not exceed runway available. (**T-3**)

4.2.9.2. Full stop landings with less than 40 degrees of flaps are not permitted.

4.2.9.3. If it appears that the actual touchdown will occur beyond the first 1/3 or 3,000 feet (whichever is less) of the runway length, Pilots will go-around.

4.2.9.4. Make no more than one full stop in a 30 minute period. When performing taxi back type operations and/or multiple full stop landings, observe brake limitations and cooling procedures IAW T.O. 1E-3A-1 and T.O. 1E-3A-1-1.

4.2.10. Missed Approach. Prior to starting an instrument approach, the AC will ensure performance complies with missed approach climb gradient requirements IAW AFI 11-202V3. For planning purposes, base performance on the expected go-around configuration.

4.3. Takeoff and Landing Policy.

4.3.1. Aircraft Commander Responsibilities.

4.3.1.1. A qualified AC will make all takeoffs and landings when either of the following conditions exist:

4.3.1.1.1. When weather is below 300’ ceiling and/or 1 statute mile (SM) visibility.

4.3.1.1.2. A distinguished visitor (Code 4, Code 4 equivalent, or higher) is on board as a passenger. **NOTE:** IPs may takeoff or land in either seat under the conditions above; however, a copilot will not occupy the left seat.

4.3.1.2. An AC, IP, or SEFE will make all approaches and landings during aircraft emergencies, unless conditions prevent compliance.

4.3.2. Copilot Takeoffs and Landings.

4.3.2.1. Copilots may perform takeoff and landings if the weather is at least 300’ ceiling and 1 SM visibility, or published minimums, whichever is higher.

4.3.2.2. During takeoffs and landings CPs must be properly supervised by an IP/SEFE or certified AC.

4.3.2.2.1. An AC must have 100 primary CMR hours in order to be certified to supervise Copilot takeoffs and landings, recommendation from an IP, and SQ/CC approval. NOTE: OG/CC may waive the hours requirement (**T-3**).

4.3.2.3. CPs must be certified by the SQ/CC as “experienced” in order to accomplish takeoffs and/or landings under the supervision of an experienced AC with passengers onboard (no DVs Code 4 or higher).

4.4. Touch-and-Go Landings. Accomplish touch-and-go landings under the following conditions:

4.4.1. IP/SEFE supervision.

4.4.2. Minimum weather required is 300’ ceiling and 1 SM visibility.

4.4.3. Crosswind component does not exceed the following (including gusts): Dry runway-15 knots; wet runway-10 knots.

4.4.4. No passengers on board.

4.4.4.1. The following are not considered passengers for this restriction: Wing supervisors, E-3 maintenance personnel, USAF Aircrew qualified in other aircraft, AFA/AFROTC cadets, FAA/ATC personnel, weapons directors, ACC TRSS Detachment 6 personnel not on aeronautical orders, Airborne Command Element (ACE) team members, Mission Essential Personnel (MEP), Security Forces, Intelligence personnel, and US customs personnel flying under the provisions of AFI 11-401 and MAJCOM supplement (**T-2**).

4.4.4.2. The following are not considered passengers for this restriction with applicable group commander approval prior to takeoff: military members not on aeronautical orders who are awaiting training, Computer Support Group (CSG) personnel conducting inflight software testing, and Mission Crew Training (MCT) and Flight Crew Training (FCT) contract instructors in direct support of training and operations (**T-3**).

4.4.5. The following length/width criteria apply: Dry runway--9,000 feet x 135 feet minimum; wet runway--10,000 feet x 135 feet minimum. On a wet runway, touchdown in the first 2,000 feet of the runway or initiate a go-around (**T-2**).

4.4.6. On wet runways, conduct touch-and-go landings at flaps 50 degrees only. On wet runways, display the actual charted go-around EPR on the inboard EPR “bugs” for quick reference in the event go-around EPR is required while airborne. Outboard EPR “bugs” should display 1.50 EPR. Wet runway touch-and-go landings are permitted with falling precipitation (i.e., drizzle or light rain), provided the precipitation is not moderate to heavy, not producing a runway surface condition (RSC), and it can be determined that water is not pooling on the runway.

4.4.7. Runway is free of all snow, ice, and slush. This does not preclude touch-and-go landings provided the RCR is reported as 10 or higher. Flight crews will use the following standard: landing surface (67.5 feet left and right of centerline) is completely clear of slush and the minimum RCR reading for any portion of the runway is 10.

4.5. Inflight Simulated Emergency/Engine-Out Procedures.

4.5.1. Inflight, prior to simulated emergency procedures, the IP/AC must alert all crewmembers in the cockpit.

4.5.2. In an actual emergency, all Student Pilot/Copilot training and simulated emergency procedures will be terminated. Training will resume only when the AC has determined that no hazard to safe aircraft operation exists.

4.5.3. Except for simulated engine-out landings, restore all aircraft systems to normal operation prior to landing.

4.5.4. IP/SEFE supervision is required for all touch-and-go landings and flaps 14, flaps 25, and flaps 25 to 50 approaches/landings. Prior to performing a flaps 14 approach/landing,

update the brake energy limited landing weight and landing distance limited landing weight and brief differences to normal configuration habit patterns, emphasizing gear lowering sequence.

4.5.5. Simulated engine-out maneuver restrictions (inflight):

4.5.5.1. Simulated engine-out takeoffs are prohibited.

4.5.5.2. Simulated two-engine operations are prohibited.

4.5.5.3. Do not accomplish actual engine shutdown inflight. A reduction in thrust can adequately simulate training in aircraft control procedures.

4.5.5.4. Limit all inflight simulated engine-out activity to a gross weight of 270,000 lbs or less, with rudder boost on.

4.5.5.5. Pilots performing simulated engineout touchandgo landings will follow normal fourengine takeoff procedures.

4.5.5.6. No passengers on board. Do not consider Flight Crew Training (FCT) contract instructors in direct support of training and operations as passengers for this restriction.

4.5.5.7. ACs/FPs certified to do so by their SQ/CC, IAW local supplements, may accomplish simulated engine-out missed approaches, go-arounds, and full-stop landings in VMC (day or night) without IP/SEFE supervision.

4.5.5.8. All planned simulated engine-out missed approaches/go-arounds will be initiated no lower than 200 feet height above touchdown.

4.5.5.9. During a simulated engine-out approach, if an unplanned go-around or missed approach is executed, establish symmetrical thrust on all engines when safe and practical.

4.5.5.10. Aircraft in day IMC require weather conditions at or above published circling minimums for the approach to be flown.

4.5.5.11. Aircraft at night require weather conditions at or above 1,000’ ceiling and 2 SMs visibility or circling minimums, whichever is higher.

4.6. Landing Attitude Demonstrations. Landing attitude demonstrations may only be accomplished by IP/SEFEs or ACs under IP/SEFE supervision. The following restrictions apply:

4.6.1. Must be accomplished four engine only.

4.6.2. Dry runway only.

4.6.3. Flaps 40 or 50 only.

4.6.4. Normal dry runway touch-and-go conditions and restrictions apply.

4.6.5. Go-around will be initiated if aircraft touches down during the initial roundout.

4.6.6. Go-around will be initiated with no less than 4,000 feet of runway remaining.

4.7. Preflight.

4.7.1. When VIP Stand or Air Stairs are unavailable, crews will arm escape slides at unopened doors to facilitate a rapid ground egress should one become necessary.

4.7.2. Receiver Autonomous Integrity Monitoring (RAIM) will normally be enabled at all times.

4.7.3. UTONAV will normally be enabled for INU ground alignment.

4.7.4. To confirm proper INU alignment, the Nav will check the INU true headings prior to engine start and confirm they are within 1 degree of each other and cross-checked with the Attitude and Heading Reference System (AHRS).

4.8. Engine Start/Taxi.

4.8.1. When using a motorized staircase vehicle (Very Important Person (VIP) Stand or Air Stairs), aircrews will close entry doors prior to the removal or placement of the stands.

4.8.2. The occupants of both Pilot seats will have their seat belt fastened while taxiing and will also wear their shoulder harness during critical phases of flight.

4.8.3. Taxi speed in the parking area or any congested area will be slow enough to accommodate a wing walker.

4.8.4. The Navigator will monitor GINS ground speed during taxi operations.

4.8.5. The Navigator will use the weather radar to scan the departure path prior to takeoff to avoid flying into areas of heavy precipitation and/or possible associated turbulence.

4.8.6. At the hammerhead, flight crews will verify the accuracy of the GINS position.

4.9. Frequency Monitoring. The AC, CP, Nav, and FE will monitor the briefed primary radio frequency during all phases of flight unless directed otherwise by the AC. The AC will ensure VHF guard, UHF guard, and mission interphone are monitored at all times. All flight deck crewmembers will normally monitor UHF/VHF guard. During critical phases of flight, only one flight deck crewmember (minimum) is required to monitor guard. Pilots have the option to monitor guard during critical phases of flight based on current workload. C2 or other frequencies to be monitored will be designated by the AC. The observer's seat occupant will be briefed on the relationship between the AC's Audio Distribution System (ADS) and the observer's interphone to prevent extraneous radio transmissions.

4.10. Altitude Monitoring. When climbing or descending, the Pilot not flying or the Navigator will call 1,000 feet above/below and approaching level off (within 200 feet) altitude. While operating at less than 2,000 feet above the ground, the Pilot not flying the aircraft will inform the Pilot at the controls anytime the indicated altitude varies more than 100 feet from the desired altitude, or if the aircraft appears to be dangerously close to terrain or obstructions. The Navigator will back up the Pilots in observing and reporting these deviations.

4.11. Departure.

4.11.1. Departure Planning. Use AFI 11-202V3, AFMAN 11-217V1, *Instrument Flight Procedure*s, this chapter, and the appropriate MAJCOM supplements. During mission planning, the flight crew will determine a gross weight that ensures E-3 performance will meet or exceed departure requirements. **Note:** In the event E-3 performance is unable to meet the published climb gradient at the desired gross weight, down load fuel, use other applicable approved methods described below, or delay until more favorable conditions exist.

4.11.2. Vertically Clear all Obstacles. Crews will calculate climb gradient data using T.O. 1E-3A-1-1 to ensure they are able to meet the 200 ft/nm or required published climb gradient. If the performance required to accomplish the mission cannot be achieved, and with OG/CC approval, crews can subtract 48 ft/nm from the published climb gradient. If required performance still can't be achieved, crews may use SDPs, with OG/CC approval. **Note:** OG/CCs may delegate approval authority down to the SQ/CC or DO as specified in the unit's supplement (**T-3**).

4.11.3. Special Departure Procedures (SDP) use and certification (IAW AFI 11-202V3).

4.11.3.1. E-3 crews are authorized to use SDPs.

4.11.3.1.1. The applicable OG will determine who can approve the use of a SDP.

4.11.3.1.2. Crews must be certified to use SDPs. The SDP Training PPT dated 11 Mar 11 (or newer versions) is the MAJCOM's approved training material and is available from OGV. Upon completion of training the individual's training folder will be appropriately annotated.

4.11.3.2. Current E-3 SDPs are retrieved from the Jeppesen AF Ops data website **http://www.jeppesen.com/wlcs/index.jsp?section=gms&content=gms_home.jsp**. User ID and password are available from OGV upon training completion.

4.11.3.2.1. Ad hoc requests for fields not currently listed may be requested through applicable OGV NLT 72 hours prior to scheduled departure. "Ad hoc" SDPs are valid for seven (7) days after the analysis date. The SDP analysis date is located in the upper left-hand corner of the takeoff performance sheet.

4.11.4. VFR departures may be used when aircrews are unable to meet or exceed the required IFR climb gradient, the mission justifies the increased risk, and the weather satisfies minimums outlined in 11-202V3 if approved by MAJCOM/A3 (**T-0**). VFR departures that do satisfy IFR climb gradient requirements still require OG/CC approval (**T-3**).

4.12. Enroute Navigation.

4.12.1. Normally plan for maximum use of E-3 navigation equipment by flying great circle routes. Random Area Navigation (RNAV)/direct routing may be flown according to FLIP, *General Planning.* Navigators will annotate changes to the route of flight on the Navigational chart (unless safety of flight dictates). Revised ETAs will be computed and the ETA to significant events will be briefed to the AC and MCC. Any waypoints or patterns entered into the navigation system will be crosschecked by an additional flight crew member.

4.12.2. The Navigator will log a full navigational fix, suitable for dead reckoning, prior to leaving radio navigation aid coverage. Additional fixes will be logged as required to ensure safe mission accomplishment. The Navigator will also perform periodic crosschecks of navigation equipment, intended route, and cleared route to identify navigation errors, prevent inadvertent deviations and ensure equipment is performing within tolerances. At a minimum, these crosschecks will be performed after level-off, prior to air refueling, during orbit intercepts and when assuming on-station. The Navigator will log the time and aircraft position as part of these crosschecks. The AC (and MCC as required) will be immediately notified of any discrepancies or malfunctions.

4.12.3. Special Qualification Airspace Navigation. Both Required Navigation Performance (RNP) Airspace and Reduced Vertical Separation Minimum (RVSM) Airspace are considered special qualification airspace. The E-3 is approved for operation in RNP airspace with operational limitations based on GINS navigational equipment. The following are E-3 CNS/ATM Certifications: RVSM, TCAS II v 7.0 (ACAS II), RNP-5, BRNAV, RNP-10, NAT MNPS (RNP-12.6), VHF-Nav FM Immunity, and 8.33 kHz VHF. Reference FLIP GP and the following guidance for RNP and RVSM requirements (**T-0**):

4.12.3.1. RNP-10 compliance includes navigation accuracy within 10 NM of actual position 95 percent of the time.

4.12.3.1.1. The E-3 may operate in RNP-10 airspace without time limits when "GPSonly" or "GPS/INS-blended" mode of navigation is selected. The E-3 may operate in RNP-10 airspace in "INS-only" mode for 6.2 hours from the time the Embedded GPS INUs (EGIs) were commanded to the NAV mode or the last aligned, whichever is later.

4.12.3.1.2. Updates will be IAW RNP/Basic Area Navigation (BRNAV) update and contingency procedures in this volume.

4.12.4. BRNAV (RNAV5) Airspace. Compliance includes navigation accuracy within 5 NM of actual position 95 percent of the time. BRNAV accuracy criteria are RNAV5.

4.12.4.1. The E-3 may operate in BRNAV (RNAV5) airspace without time limits when "GPS-only" or "GPS/INS-blended" mode of navigation is selected. The E-3 may be operated in BRNAV/RNAV5 airspace in "INS-only" mode for 2.0 hours from the time the EGIs were commanded to the NAV mode or the last aligned, whichever is later.

4.12.5. RNP/BRNAV Flight Planning. The PIC will review airspace requirements (i.e. specific RNP level and contingency actions, etc.) and assess mission impact when flying in RNP10/BRNAV (RNAV5) airspace (**T-0**).

4.12.5.1. Enroute. At the RNP/BRNAV entry point both EGIs must be operational and RAIM must be ON and operational. Periodic crosschecks of all available navigation sources, intended route, and cleared route 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.

4.12.6. Reduced Vertical Separation Minimum (RVSM) Airspace. Airspace where RVSM is applied is considered special qualification airspace.

4.12.6.1. RVSM Equipment/Operations. Both primary altimeters, the autopilot (to include the altitude hold function), the altitude alerter system, and the IFF transponder must be fully operational before entry into RVSM airspace (**T-0**). Before entering RVSM airspace advise ATC of any RVSM equipment failures and request a new clearance (**T-0**).

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

4.12.6.1.2. Altimeters. Altimeters will be crosschecked ever hour to ensure they agree ± 200 ft.

4.12.6.1.3. Should any of the required equipment fail after entry into RVSM airspace, immediately notify ATC and coordinate a plan of action (**T-0**).

4.12.6.1.4. 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 traffic collision avoidance system (TCAS) operations.

4.12.7. Trans-oceanic flights. To minimize trans-oceanic gross navigational errors (GNE), Navs will accomplish a coast out/in fix during trans-oceanic flights or when the aircraft is operating out of radio aid range. For trans-oceanic flights Navigators will compute an equal time point (ETP). Additionally, the Nav will annotate the time over an oceanic checkpoint on the Navigational chart. The aircraft heading will be crosschecked with the planned heading. The Nav will annotate the aircraft position on the navigational chart approximately 10 minutes after each oceanic waypoint is passed.

4.13. On-Station.

4.13.1. The CSO will normally control the use of HF 1. The AC will coordinate with the CSO if the flight crew requires its use. The MCC/CSO will coordinate with the AC if the mission crew requires the use of either of the flight crew's VHF or UHF radios.

4.13.2. Pilots and Navigators will closely monitor the first complete trip around the orbit after initial intercept to ensure the aircraft is maintaining proper orbit.

4.13.3. The AC has the responsibility and final authority for determining when the aircraft should depart station. ACs will consider forecast enroute and destination weather, enroute winds, icing, mission requirements, fuel requirements, training requirements, etc.

4.13.3.1. Within 1 hour after assuming station or refueling, the flight crew will compute "bingo fuel" and report remaining station time to the MCC. If AAR is planned after orbit, make a similar computation allowing enough fuel so that in the event of a missed AAR, the aircraft can land at the destination or a preplanned alternate with the required fuel minimums. Bingo fuel computations will not include center wing tank fuel used as ballast to maintain center of gravity (c.g.) forward of 35% mean aerodynamic chord (MAC).

4.13.3.2. If fuel requirements necessitate a modification to on-station duration, pattern, or altitude, the AC will notify the MCC.

4.13.3.3. Aircrews will evaluate weather considerations within 1 hour after assuming station and make periodic weather checks as necessitated by forecasted or current conditions. This check may include enroute, refueling track, landing base, and alternate base weather as required.

4.13.3.4. Crews should fly an alternate mission in lieu of dumping fuel to adjust gross weight should an equipment malfunction or an inability to complete an assigned mission occur. Alternate missions should be planned and briefed during mission planning day.

4.14. Arrival and Approach.

4.14.1. Approach Briefing. Prior to starting descent from cruise altitude, the Pilot flying the approach will brief the crew IAW T.O. 1E-3A-1 and AFMAN 11-217V1 requirements. During an approach, the AC, CP or FP, and Nav will each have a separate Terminal Approach Procedure or Standard Terminal Arrival Route (STAR) booklet available for use

during the descent briefing and to reference during the approach. The Pilot not flying the approach and the Nav will monitor their respective instruments and all radio transmissions by the controlling agency, and advise the Pilot making the approach when noting any deviation from the prescribed procedures or instructions.

4.14.2. Instrument Approach Advisory Calls. The Pilot monitoring the approach will make the following advisory calls:

4.14.2.1. Non-Precision Approaches:

4.14.2.1.1. 100 feet above minimum descent altitude (MDA).

4.14.2.1.2. "Minimums" at MDA.

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

4.14.2.1.4. "Visual descent point (VDP)."

4.14.2.1.5. "Missed Approach Point," (MAP), if applicable.

4.14.2.2. Precision Approaches:

4.14.2.2.1. 100 feet above decision altitude (DA).

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

4.14.2.2.3. "Decision altitude."

4.14.2.3. The Navigator will monitor altitude and report deviations.

4.14.2.4. The Pilot flying the aircraft will:

4.14.2.4.1. Acknowledge all advisory calls over interphone.

4.14.2.4.2. Announce intentions over interphone at the appropriate decision point for both instrument and visual approaches (i.e. "Crew we're going to land/go-around/touch-and-go").

4.14.3. Priorities. Upon commencing the final approach (glideslope interception or departing the final approach fix [FAF]), flight deck crewmembers will avoid unnecessary distractions. Priorities will be monitoring the approach/landing and completing the BEFORE LANDING checklist. All activities not associated with the approach/landing checklist accomplishment will cease.

4.15. Simulator Only Maneuvers. The following maneuvers will be practiced in the flight simulator only:

4.15.1. Aborted takeoff.

4.15.2. Engine failure(s) during takeoff and/or climbout to traffic pattern altitude.

4.15.3. Two-engine operations (cruise, approach, go-around, and/or landing).

4.15.4. Three-engine rudder boost out operations (cruise, approach, go-around, and/or landing).

4.15.5. Initial Buffet/Stick Shaker Recovery.

4.15.6. Unusual Attitudes.

4.15.7. Flaps-up landing and touch and go.

4.16. Occupancy of Flight Crew Duty Positions.

4.16.1. ACs and FPs may perform their duties from either seat. CPs must be certified by the SQ/CC IAW local supplements in order to perform duties in the AC position during critical phases of flight and then may do so only under IP/SEFE supervision.

4.16.2. During non-critical phases of flight, if the AC or CP leaves the flight deck, the FE position must be occupied by a qualified FE or be supervised by an instructor/SEFE FE.

4.16.3. During critical phases of flight or simulated/actual emergencies, unqualified Pilots or Pilots not in training to achieve qualification in the E-3, will not occupy any flight crew duty position. Rated Pilot General/Flag officers flying under provisions of MAJCOM guidance are exempt. Waiver authority is MAJCOM/A3.

4.17. Midair Collision Avoidance.

4.17.1. Man all flight deck seats below FL 180 to the maximum extent practical. Crews will maintain an IFR clearance for separation and use autopilot whenever practical. The Navigator and Pilots will use the weather radar when possible to search for traffic. The Observer, when available, will be on headset and actively scan for traffic.

4.17.2. Make seat changes for the AC or CP position with the autopilot and altitude hold engaged if practical. Initiate seat changes while stabilized in the IFR traffic pattern, extended VFR traffic pattern or when above 10,000 feet MSL during climbs and descents. Emphasize clearing during the seat change.

4.17.3. TCAS operation will be IAW AFI 11-202V3.

4.18. Equipment on the Flight Deck. Hold crew equipment and publications on the flight deck to a minimum commensurate with mission requirements. Stowed equipment must not prevent rapid egress from the flight deck.

4.19. In-flight Meals. The AC and CP should not eat meals at the same time and their meals should consist of different menu items if prepared by the same flight kitchen or organization.

4.20. Fuel Requirements. For planning purposes, fuel reserves on all flights will be 18,000 pounds over the destination (or alternate when required) initial approach fix, or IAW AFI 11-202V3, whichever is greater. Fuels listed herein are minimum required fuels. The PIC may plan to arrive overhead with more fuel based on the dynamics of the mission (e.g. weather enroute, airport environment, etc.).

4.20.1. Fuel required at the initial approach fix at the original destination will allow a penetration and one approach, then climb to optimum altitude and arrival over the alternate initial approach fix with 18,000 pounds of fuel or greater.

4.20.2. Minimum landing fuel for flights on an IFR clearance is 15,000 pounds. "Minimum Fuel" will normally be declared to the controlling agency when it is determined the aircraft may land at the intended destination with 15,000 pounds of fuel remaining or less. However, if the destination airfield is VFR, and after the aircraft is established in the airfield's radar and/or visual traffic pattern, practice approaches and landings may be conducted until 12,000 pounds of fuel remain, provided CG limits are not exceeded or weather conditions deteriorate below VFR.

4.20.3. "Emergency Fuel" will be declared to the controlling agency when it is determined the aircraft may land at the intended destination with 10,000 pounds of fuel or less.

4.20.4. When mission requirements dictate and when specifically approved by the applicable group commander, fuel reserves may be reduced (provided they meet or exceed AFI 11-202V3 requirements) to the following: Initial Approach Fix-12,000 pounds, Minimum Fuel-10,000 pounds, Emergency Fuel-8,000 pounds.

4.21. Aircraft Ground Refueling. FEs are authorized to refuel the aircraft. When refueling/defueling aircraft at bases where E-3 maintenance support is not available, FEs will comply with T.O. 1E-3A-2-7-5CL-1, *Refueling and Defueling,* T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding* and T.O. 1E-3A-2-7, *Ground Handling-Servicing and Airframe* (**T-3**).

4.21.1. Anytime adequate portable firefighting equipment is unavailable or any condition listed under Abnormal Conditions, Section 1, T.O. 00-25-172 exists, the FE will notify the local fire department. The fire department will be informed of the abnormal condition and parking spot/ location of aircraft. The FE should be informed by the fire chief of the estimated response time or if a standby fire truck needs to be in position prior to servicing. Communication capability will be immediately available.

4.21.2. In the event base support is limited or nonexistent, other crewmembers may be used as refueling team members at the discretion of the AC. The Flight Engineer will brief all team members on the use of fire equipment, safety precautions, and emergency shutdown procedures.

4.22. Fuel Jettisoning. Conduct fuel dumping only to reduce gross weight in an emergency or for operational necessity. When circumstances permit, dump above 5,000 feet AGL over unpopulated areas or in designated fuel dump areas. Advise the appropriate air traffic control agency of intentions, altitude, and location when fuel is jettisoned and when the operation is complete. Make the appropriate entry on the AFTO Forms 781A/H, *Aerospace Vehicle Flight Status and Maintenance Document*.

4.23. Aircraft Interior Lighting. During ground/flight operation, it is recommended to keep flight deck lighting at the lowest practical level. During night parking, do not use the high level flight deck lighting until after the aircraft is chocked and brakes are released. This will allow the Pilots to ensure that the aircraft does not roll.

4.24. Inflight Engine Failure. During peacetime training missions, if an engine is shutdown in flight, terminate the mission and land as soon as practical, IAW TO 1E-3A-1. During contingency operations, if an engine is shutdown in flight, mission requirements may necessitate continuing the sortie unless safety of flight is compromised.

4.25. Inflight Troubleshooting. After flight manual emergency procedures are complete, aircrews will not conduct in-flight troubleshooting.

4.25.1. Cockpit Voice Recorder (CVR). If involved in a mishap or incident, after landing and terminating the emergency, pull the CVR power circuit breaker.

4.26. Flight Control Malfunctions.

4.26.1. The following procedures will be adhered to when maintenance "redballs" for primary flight control malfunctions during preflight or ground operations. The AC along with maintenance personnel will evaluate the malfunction and determine appropriate actions necessary to provide an airworthy aircraft. If the malfunction cannot be isolated to a particular part and repaired within a suitable amount of time, the aircraft will be returned to maintenance for repair.

4.26.2. Inflight, if a primary flight control malfunction is experienced, the flight crew will perform the appropriate flight manual procedures, terminate the mission, and land as soon as practical, IAW T.O. 1E-3A-1.

4.27. Divert Charts. Units will develop divert charts to cover their local operating areas and publish them in their local chapter to this instruction. Information contained on these charts will include divert airfields, headings, distances, flight times, fuel requirements, and cruise altitudes. Carry divert charts on all flights.

4.28. Air-to-Air Refueling Restrictions/Procedures.

4.28.1. AAR Refueling procedures will be conducted IAW ATP 56 (B), Air-*to-Air Refueling*, and national annexes. Plan to AAR with a center of gravity forward of 32% MAC. AAR can be accomplished outside of these limits provided it is thoroughly briefed prior to conducting AAR.

4.28.2. For all normal operations, the gross weight inflight with flaps up will be limited to the maximum gross weight versus altitude for a 2.5G load factor IAW TO 1E-3A-1, Section 5. Use of gross weights versus altitude for a 2.0G load factor require applicable group commander approval.

4.28.3. Do not accomplish AAR during training missions when any conditions are encountered which, in the opinion of the AC or boom operator, result in marginal control of the aircraft or the boom.

4.28.4. Do not accomplish AAR if any primary flight control malfunctions are encountered or with the series yaw damper inoperative.

4.28.5. Do not accomplish AAR without tanker disconnect capability, to include manual boom latching, unless an actual fuel emergency or operational necessity exists.

4.28.6. Boom Envelope Demonstrations will be conducted under IP/SEFE supervision. The boom operator will initiate and ensure disconnect capability before demonstrating limits IAW ATP-56(B).

4.28.7. Non-AAR qualified FPs are authorized to fly the aircraft up to and including precontact from either the right or left seat with an AC in the other seat, but must not close to the contact position unless under IP/SEFE supervision. AAR qualified FPs are authorized to fly the aircraft up to and including contact from either the left or right seat with an

experienced AC in the other seat. Non-AAR qualified CPs are authorized to fly the aircraft up to and including precontact from the right seat with an AC in the left seat, but will not close inside precontact unless under the supervision of an IP/SEFE. AAR qualified CPs are authorized to fly the aircraft up to and including contact from the right seat with an experienced AC in the left seat. CP AAR from the left seat will be conducted under IP/SEFE supervision.

4.28.8. ACs/CPs undergoing initial qualification or upgrade training may conduct a rendezvous up to 1 NM from the tanker without IP/SEFE supervision.

4.28.9. To allow time to establish communications with ATC, discontinue air refueling at least 3 minutes prior to the end of track and descend to the bottom of the block.

4.28.10. Loss of Radio Contact. If contact is not established or is lost between tanker and the E-3 on the allocated AAR frequency, follow "Loss of Radio Contact" guidance IAW ATP-56(B).

4.29. Post AAR Procedures. Use the following procedures after completion of air refueling to achieve safe separation from the tanker:

4.29.1. The receiver Pilot will maintain stabilized in the contact position while asking for or initiating a disconnect and will remain stabilized until confirming either visually or verbally that the boom is clear.

4.29.2. After confirmation that the boom is clear, the receiver Pilot will begin to move aft to the pre-contact position. Once this separation has been attained, the receiver Pilot will begin a slow descent at approximately 500 to 1,000 feet per minute (fpm) and establish a power setting that will ensure increased vertical separation and avoid under-running the tanker during descent.

4.29.3. The Pilot will establish a minimum of 1,000 feet vertical separation between the receiver and the tanker. Do not make any turns from the established air refueling heading during the descent phase.

4.29.3.1. Establish 1,000 feet vertical separation and engage autopilot (if available) before initiating the post-air refueling checklist. Slipway doors may be closed to reduce cockpit noise levels. The autopilot circuit breaker may be reset if opened prior to air refueling.

4.29.3.2. To ensure safe separation during the separation maneuver, the Pilot not in control of the airplane and the Navigator will monitor the positions of all tankers in the formation by whatever means possible (visual, weather radar, air-to-air TACAN, etc.).

4.29.3.3. If the receiver cannot descend to establish the required vertical separation, the receiver will move back to the precontact position and request the tanker initiate a climb to obtain a minimum of 1,000 feet vertical separation.

4.30. Formation Restrictions. The enroute cell and air refueling formations described in ATP-56(B) are the only authorized formations. Crews will only fly these formations when specifically tasked, using the procedures published in the appropriate tech orders.

4.31. Abnormal Configurations. Do not fly missions with known abnormal configurations unless approved by the applicable group commander. Abnormal configurations can include a six or seven brake only operation, partial spoilers, inoperative antiskid, etc.

4.32. Three-Engine Ferry Flights. Do not conduct three engine ferry flights unless specifically approved by applicable MAJCOM/A3.

Chapter 5

MISSION CREW OPERATING PROCEDURES

5.1. E-3 Missions.

5.1.1. E-3 Tactical Mission:

5.1.1.1. The E-3 is a primary airborne element of the Theater Air Control System (TACS). Specific mission taskings will be determined by the Joint Force Air Component Commander (JFACC). The E-3 may be responsible for:

5.1.1.1.1. Surveillance within its assigned area of responsibility (AOR).

5.1.1.1.2. Detecting and assessing potential threats and passing threat calls to affected aircraft under E-3 control or to appropriate TACS agencies

5.1.1.1.3. Transmitting accurate and timely surveillance data to the CRC/Air Operations Center (AOC) and crosstell appropriate surveillance data to adjacent command and control facilities.

5.1.1.1.4. Identification of traffic in areas without existing ground identification authority or when ground identification facilities are degraded and not capable of providing the identification function.

5.1.1.1.5. Issuing of scramble orders or airborne orders in the absence of ground tactical air control system (GTACS) or when authority is delegated by the AOC.

5.1.1.1.6. Commitment of defensive counterair weapons. This may be self-initiated or directed by a AOC/CRC.

5.1.1.1.7. Maintaining status of available weapons and equipment.

5.1.1.1.8. Airspace regulation and control within an assigned control area.

5.1.1.1.9. Maintaining continuous communications with other airspace control agencies.

5.1.1.1.10. Relaying information/instructions from the AOC, CRC, and other elements of the TACS (i.e. Joint Surveillance Target Attack Radar System [JSTARS]) to airborne aircraft.

5.1.1.2. When the primary or alternate AOC is inoperative, the JFACC may direct an E-3 to continue to manage tactical air operations until the AOC becomes operational. Under this condition, additional E-3 responsibilities may include voice coordination with Army, Navy, Allied units, and Air Support Operations Centers (ASOCs).

5.1.2. E-3 North American Aerospace Defense Command (NORAD) Missions. The NORAD strategic air defense mission covers three roles: air sovereignty, tactical warning, and atmospheric defense. Air sovereignty is the peacetime policing of the combined US/Canadian sovereign airspaces to ensure that all air traffic using the airspace complies with national regulations. The second role of tactical warning includes detecting, characterizing, and assessing potential threats. The third role is the wartime role of

atmospheric air defense against an enemy threat or attack. NORAD performs these roles by integrating a variety of sensor equipment, communications, aircraft, and facilities.

5.1.3. E-3 Counter Narcotics Terrorism. The E-3 counterdrug (CD) mission is to assist national agencies in interdiction of suspected drug traffic IAW command directives.

5.1.4. Joint Tactical Air Operations (JTAO). Integration and coordination among all C2 units deployed to a particular theater is paramount for effective JTAO operations. JTAO operations are defined in the *JTAO Procedural Handbook*. E-3 crews must be fully trained to execute the Air Tasking Order (ATO), Airspace Control Order (ACO), and Operation Task Link (OPTASKLINK) in a joint environment to ensure proper force management and control of weapons systems. The entire system is dependent upon the effective use and control of data links. E-3 crews must understand their role within the joint data network and how their data can both aid and hamper JTAO. CJCSM 3115.01A, *Joint Data Network Operations*, outlines the duties of the Joint Information Coordination Center (JICC) and how the multi-link network is to be administered. E-3 crews will operate data link equipment IAW CJCSM 6120.01C, *Joint Multi-Tactical Data Link (TDL) Operating Procedures*, and the written guidance of the Joint Interface Control Officer (JICO) (i.e. OPTASKLINK, OPTASK ID Sup, and Tactical Operation Data (TACOPDAT)). During missions, the crew will adhere to the directions of the joint, regional, or sector interface control officers (J/R/SICO). Coordination will be performed on the assigned interface control net (ICN)/data link coordination net (DCN) and track supervision nets (TSN). All E-3 crewmembers participating on these nets must be familiar with directed net procedures and follow the directions of the net control station (NECOS).

5.2. Responsibilities.

5.2.1. Battle Management

5.2.1.1. Mission Crew Commander. The MCC is responsible to the appropriate commander for the safe, efficient and successful conduct of the E-3's management of the air battle. The MCC is responsible for the leadership, management, supervision, and training of the mission crew. The MCC will:

5.2.1.1.1. Notify the AC and mission crew of all situations that could adversely affect safety of flight operations or mission accomplishment.

5.2.1.1.2. Execute command directives and perform battle management functions as required, to include transmitting, receiving, authenticating and executing command messages.

5.2.1.1.3. Be responsible to the appropriate command authorities for the application and execution of applicable operations orders (OPORDs), OPLANS, ATO, OPTASKLINK, special instructions (SPINS), ROE and other theater specific command directives involving E-3 employment.

5.2.1.1.4. Ensure the mission and flight crews are thoroughly briefed and prepared to meet mission tasking.

5.2.1.1.5. Be responsible for the completion of the master communications worksheet, but may delegate responsibility to the SD.

5.2.1.1.6. Have a thorough understanding of the capabilities and tactics of hostile and friendly forces.

5.2.1.1.7. Ensure mission systems are configured and the database information is current and correct to meet mission tasking. Supervise the communications, data processing and display, and sensor system functions to ensure effective support of mission objectives.

5.2.1.1.8. Coordinate and manage the air battle with appropriate command authorities and direct tactical action IAW theater ROE.

5.2.1.1.9. Coordinate with the AC on tactical positioning of the E-3 to ensure safe and efficient mission execution.

5.2.1.1.10. Manage the orderly transfer of database information and station responsibility.

5.2.1.1.10.1. Declare on station when all mission systems required to accomplish the assigned mission are operational, the E-3 is in position to accomplish the assigned mission, and the mission crew have completed their minimum station assumption requirements.

5.2.1.1.10.2. Notify the appropriate command authorities of the "ops normal/on station" calls, and other theater specific calls as specified by directives and any deviations from mission tasking.

5.2.1.1.11. Thoroughly assess equipment malfunctions and determine impact on the assigned mission. Coordinate with the AC to assess the risk of continued use against safety and integrity of the aircraft, and mission accomplishment. The AC is the final authority and is responsible for the safety of the aircraft.

5.2.1.1.12. Approve/coordinate downtime for scheduled/unscheduled maintenance.

5.2.1.1.13. Debrief the crew, appropriate command authorities and unit agencies as required by theater directives.

5.2.1.1.14. Ensure all required mission forms/reports are completed and turned in to the appropriate agencies/offices as required.

5.2.2. Surveillance. The Air Surveillance Officer (ASO), the Senior Surveillance Technician (SST), and the Air Surveillance Technician (AST) perform the surveillance functions.

5.2.2.1. Air Surveillance Officer. The ASO is responsible to the MCC for all surveillance functions. The ASO will:

5.2.2.1.1. Monitor and direct the accurate collection, display, and dissemination of surveillance data.

5.2.2.1.2. Direct and/or coordinate the tracking and identification of all observed activity within designated areas.

5.2.2.1.3. Analyze the surveillance situation and advise the MCC of surveillance capabilities.

5.2.2.1.4. Notify the MCC whenever Electronic Attack (EA) is experienced and coordinate Electronic Protection (EP) actions.

5.2.2.1.5. Notify the MCC and SD of any suspected emergency IFF/selective identification feature (SIF) returns or triangular distress patterns.

5.2.2.1.6. Document all radar/IFF electronic combat (EC) training events on applicable forms and forward them to the squadron Weapons and Tactics office.

5.2.2.1.7. In conjunction with the SST, coordinate with external agencies to ensure accurate multi-link operations IAW J/R/SICO guidance. The ASO will coordinate any data link modifications (filters, duties, ID usage) with the JICO to ensure there are no impacts to the link architecture. Concurrent operations will not be used unless specifically mentioned in the OPTASKLINK or directed by the JICO.

5.2.2.1.7.1. Implement changes in interface configuration as directed.

5.2.2.1.7.2. Implement data link filters as stated in the OPTASKLINK or TACOPDAT. Any changes to filters must be approved by the JICO.

5.2.2.1.7.3. Utilize the ICN and DCN to coordinate with J/R/SICO and other multi-link participants using directed net procedures if required by the NCS.

5.2.2.1.7.4. Monitor track exchange (surveillance, weapons, and ES) and coordinate with SST, SD, and ECO if required.

5.2.2.1.7.5. Provide recommendations to JICO for data link changes. Forward changes to E-3 initial exchange requirements (IERS) to the JICO through the appropriate agency (i.e., MPT, OSXR, OSOE, etc.).

5.2.2.1.8. Assign and supervise SST and AST responsibilities.

5.2.2.1.9. Monitor and maintain sensor quality for mission duration.

5.2.2.1.10. Ensure surveillance team members receive maximum training from available resources including simulation (SIM).

5.2.2.2. Senior Surveillance Technician. The SST is a supervisory position responsible to the ASO and will provide assistance as required. The SST will:

5.2.2.2.1. Supervise the detection, tracking, reporting, identification, and recording of surveillance data.

5.2.2.2.2. Ensure the completion of AST duties.

5.2.2.2.3. Monitor sensors in the assigned areas, notify the ASO of any unusual presentations.

5.2.2.2.4. Coordinate with the ASO/CSO or CT, as required, in the establishment and operation of data links.

5.2.2.2.5. Notify the ASO of any suspected emergency IFF/SIF returns or triangular distress patterns.

5.2.2.3. Air Surveillance Technician. The AST is responsible for surveillance functions as directed by the ASO/SST. The AST will:

5.2.2.3.1. Initiate on all data trails appearing within the assigned AOR and ensure continuity of tracking.

5.2.2.3.2. Upon receipt of voice told tracks, monitor telling source and enter that track data into the computer. On such tracks, monitor sensor data that may correlate and take appropriate action to effect correlation.

5.2.2.3.3. Tell tracks.

5.2.2.3.4. Notify the ASO/SST of all unusual console presentations (e.g. EA, electro-magnetic interference (EMI), erroneous computer generated data, etc.). Reporting format will include number and type of strobe(s), effect on radar EP, bearing, power level, and time of occurrence.

5.2.2.3.5. Notify the ASO/SST of any suspected emergency IFF/SIF returns or triangular distress patterns.

5.2.2.3.6. Initiate and maintain passive tracking when directed by the ASO/SST.

5.2.2.3.7. Assist the ASO/SST with flight plans and other identification functions.

5.2.3. Electronic Combat Officer (ECO). The ECO analyzes Electronic Support (ES) data from on-board and off-board sensors, fuses that data with other on-board and off-board sensors, then disseminates a comprehensive ES picture both internally (on-board the E-3) and externally (via data links and communications nets). The ECO is responsible to the MCC for all ES. The ECO will:

5.2.3.1. Monitor the accurate collection, display and dissemination of ES data.

5.2.3.2. Analyze the ES situation and advise the MCC of ES data.

5.2.3.3. Locate, report, and log all emitters of interest IAW ROE, theater, and MPC directives.

5.2.3.4. Coordinate with external agencies to ensure the accuracy of ES data.

5.2.3.5. The ECO will maintain SA on Non-Kinetic Operations (NKO) and SEAD capabilities, orbits, and routing to ensure tactical ES mission accomplishment and continuous package threat awareness.

5.2.3.6. Estimate and/or predict the capabilities of hostile forces and friendly forces relative to the Electronic Order of Battle (EOB).

5.2.3.7. Direct and/or coordinate the ES identification of all observed activity within designated areas with all Electronic Warfare (EW) assets.

5.2.3.8. The ECO will perform a systematic checkout of the Passive Detection System (PDS) and brief the MCC on the results. If checkout is satisfactory, PDS will be declared operational.

5.2.4. Weapons. The Senior Director (SD) and Air Weapons Officer (AWO) perform the weapons function. They are responsible for the direction, monitoring, and flight following of assigned aircraft during tactical and air refueling missions, both operational and training. They are responsible for extracting data from OPORDS, OPLANS, and other theater and command directives for E-3 employment and weapons mission execution.

5.2.4.1. Senior Director. The SD is responsible to the MCC for conduct of the air battle and for the control of all assigned aircraft and weapons systems. The SD will:

5.2.4.1.1. Supervise all AWO activities.

5.2.4.1.2. Maintain data on friendly and enemy orders of battle and coordinate with the ECO on any correlation with Tactical Site Files (TSF).

5.2.4.1.3. Estimate and/or predict the capabilities of hostile forces, develop a plan or plans, which organize friendly counter forces, and defeat/negate the threat.

5.2.4.1.4. Maintain current and accurate tactical situation, weapons, weather, airbase status, and other situational information.

5.2.4.1.5. Maintain force accountability of all friendly assets assigned for control.

5.2.4.1.6. Coordinate the air battle with appropriate agencies to ensure the accomplishment of all assigned weapons missions.

5.2.4.1.7. Direct the pairing of weapons against assigned targets.

5.2.4.1.8. Coordinate directly with the ASO to obtain surveillance support and optimum sensor quality and the ECO to obtain status of EW assets and optimum sensor configurations.

5.2.4.1.9. Notify the MCC and ASO of any suspected emergency IFF/SIF returns or triangular distress patterns.

5.2.4.1.10. Ensure weapons team members receive maximum training from available resources including SIM.

5.2.4.1.11. Develop and maintain the communications worksheet for the weapons section. Responsibility for the master communications worksheet may also be the responsibility of the SD if delegated by the MCC.

5.2.4.2. Air Weapons Officer. The AWO is responsible to the SD for the control and safe regulation of air traffic for all assigned missions. The AWO will:

5.2.4.2.1. Locate, identify, and track aircraft assigned for control.

5.2.4.2.2. Control aircraft against assigned targets.

5.2.4.2.3. Ensure orderly and expeditious recovery of assigned aircraft.

5.2.4.2.4. Coordinate with internal and external agencies, as applicable, on matters pertaining to flight safety/mission accomplishment.

5.2.4.2.5. Direct air refueling missions consistent with prescribed emissions control (EMCON) procedures.

5.2.5. NORAD Certified Crewmember (NCCM).

5.2.5.1. NCCM Responsibilities. The NCCM is responsible for receiving and communicating message traffic concerning Emergency Action Messages (EAM)/Quick Reaction Messages (QRM) and Tabular Reports (TABs). The NCCM will:

5.2.5.1.1. Ensure NORAD support equipment is aboard the AWACS and will coordinate communications/radios with the mission crew.

5.2.5.1.2. Orient the mission crew with NORAD C2 functions and identify responsibilities and authorities of NORAD assigned AWACS missions. The mission crew may be augmented with NORAD personnel, based on tasking and mission requirements.

5.2.6. Communications. The communications function is performed by the Communications Technician (CT) and the Communications Systems Operator (CSO).

5.2.6.1. The CT is responsible to the AC/MCC for the proper maintenance and operation of flight and mission crew communications and related equipment. The CT will:

5.2.6.1.1. Evaluate equipment status of the Communications Functional Group (CFG) and advise the MCC of its capabilities to support mission requirements.

5.2.6.1.2. Configure, operate and monitor Joint Tactical Information Distribution System (JTIDS) equipment and software.

5.2.6.2. The CSO is responsible to the AC/MCC for proper programming management and operation of flight and mission crew communications systems. The CSO will:

5.2.6.2.1. Tune, configure, and operate clear and secure voice communications systems and communication nets to support mission requirements.

5.2.6.2.2. Configure and operate Link-11 equipment and software.

5.2.6.2.3. Perform frequency management; recommend and make required communications changes.

5.2.6.2.4. Compile and transmit required inflight and position reports to appropriate facilities.

5.2.6.2.5. Coordinate, obtain, use, and control COMSEC material and equipment.

5.2.7. Computer Display Maintenance Technician / Systems Technician (CDMT/ST)

5.2.7.1. CDMT/ST responsibilities. The CDMT/ST is responsible to the MCC for the operation, monitoring, and limited inflight maintenance of the Data Processing, Data Display, Onboard Test Monitor and Maintenance functional groups and ES Measures Group (ESMG). The CDMT/ST will:

5.2.7.1.1. Perform loading of the Data Processing System, auxiliary system(s), and monitor the performance of the Data Processing System, Data Display System, auxiliary system(s). The CDMT/ST will also perform Onboard Test Monitor and Maintenance Groups using fault indications, ESM, and software messages displayed at the Computer Technician console.

5.2.7.1.2. Monitor the status of mission avionics equipment tested by the computer for efficient operation.

5.2.7.1.3. Service the Data Processing peripheral equipment.

5.2.7.1.4. Perform diagnostic maintenance programs.

5.2.7.1.5. Perform inflight troubleshooting and fault isolation.

5.2.7.1.6. Perform replacement of modules as required.

5.2.7.1.7. Perform utilities programs.

5.2.7.1.8. Establish and maintain connectivity with Iridium Chat System (ICS) equipment.

5.2.8. Systems Technician (ST)

5.2.8.1. ST responsibilities. The ST is responsible to the MCC for the operation, monitoring, and limited inflight maintenance of the Mission Computing System (MCS), Onboard Test Monitor and Maintenance functional groups and ES Measures Group (ESMG). The ST will:

5.2.8.1.1. Perform loading of the MCS, auxiliary system(s), and monitor the performance of the MCS, auxiliary system(s). The ST will also perform System, Monitoring, Testing and Control, Onboard Test Monitor and Maintenance Groups using fault indications, ESM, and software messages displayed at the assigned ST Operator Work Station (OWS).

5.2.8.1.2. Monitor the status of mission avionics equipment tested by the computer for efficient operation.

5.2.8.1.3. Service the MCS peripheral equipment.

5.2.8.1.4. Establish and Maintain Connectivity with ICS equipment.

5.2.8.1.5. Perform inflight troubleshooting and fault isolation.

5.2.8.1.6. Perform replacement of modules as required.

5.2.8.1.7. Initiate system checkout programs.

5.2.9. Airborne Radar Technician (ART) The ART is responsible to the MCC for the operation and maintenance of the radar and IFF systems and their subsystems. The ART will:

5.2.9.1. Initiate and monitor the Surveillance Radar Functional Systems and Identification Functional Systems.

5.2.9.2. Perform radar equipment test (Fault Isolation) routines and other checkouts.

5.2.9.3. Troubleshoot malfunctions in sensor systems and repair or replace equipment as required.

5.2.9.4. Monitor surveillance equipment operating performance levels.

5.2.9.5. Initiate and monitor associated test equipment to optimize performance of sensor systems.

5.2.9.6. During deployment or dispersed base operations, if there is no conflict with flying responsibilities (e.g., crew rest and duty day), the ART will assist ground based personnel with maintenance activities when required.

5.2.9.7. Coordinate with the ASO on radar operating parameters (i.e. dedicated time test azimuth, second-time-around-thresholds, etc.), and on detection, analysis, and response to EA.

5.3. Operational Procedures.

5.3.1. Aircraft Mission Systems History Log Book. Maintain a history log book for each aircraft. Units will develop history log book procedures and ensure log books are readily available. Technicians will review the log book during preflight.

5.3.2. Equipment Malfunctions. The MCC, after coordination with the AC on equipment issues which affect aircraft systems, must approve continued operations of malfunctioning mission equipment that would affect the mission. The MCC will evaluate the impact of using degraded equipment against the mission tasking and the inability to meet that tasking.

5.3.3. Air Surveillance Procedures:

5.3.3.1. Coordination. The ASO will coordinate with the SD, ECO, and MCC to ensure all activity is conducted on an appropriate map. Coordinate Command and Control Coordinate System (CCCS) origin changes with the MCC, CDMT/ST and ECO prior to taking the switch action.

5.3.3.2. Briefings. The ASO/SST will accomplish a surveillance briefing on mission planning day that will cover surveillance information and contracts applicable to the entire mission and/or flight crew. The ASO will also accomplish a surveillance specialized briefing prior to assuming station. As a minimum, this briefing will include surveillance areas not covered in previous briefings and any areas needing extra emphasis, such as individual taskings, surveillance contracts, ROE, symbology and tracking, identification plan, and contingency/emergency duties.

5.3.3.3. Sensor Management/Procedures. Prior to assuming station, the ASO will perform sensor checks to determine the optimum radar/IFF settings for the mission. The ASO will brief the MCC on the results of the checks and the final radar setup. Sensor check procedures include:

5.3.3.3.1. IFF Sensor Check. Perform a systematic checkout of the IFF, to include all operational Receiver/Transmitters (R/T)s as soon as it becomes available. If equipment malfunctions, the ASO will accomplish an additional check once the unit is back on line. If a previously unchecked R/T unit comes on line, the ASO will again accomplish an additional check. As a minimum, the ASO will check:

5.3.3.3.1.1. Mode IV Test. Perform a mode IV loop test prior to declaring the IFF operational.

5.3.3.3.1.2. Maximum Range. Measure the maximum range of the IFF by determining the range of an IFF sensor return with a consistent (three out of seven returns) data trail.

5.3.3.3.1.3. IFF Jitter. Check in all quadrants, as close as possible to, but not beyond, 250 NM from the E-3. Measure jitter as sideways displacement of returns from a straight-line path. Normally jitter up to 3 NM is acceptable.

5.3.3.3.1.4. Quality. The overall quality of the IFF will be determined by checking consistency of data trails, and when radar becomes available, the mileage difference between the IFF and radar sensor returns. Normally, returns within 2 NM are acceptable. Accomplish this check within a radius of 250 miles from the E-3.

5.3.3.3.1.5. Resolution of IFF Overloads. The ASO will monitor IFF counts and

make necessary adjustments to resolve overload conditions and minimize the loss of IFF data.

5.3.3.3.2. Radar Sensor Check. Time permitting, the ASO will check as many RF sets as possible, and select a primary and secondary RF set (preferably not in the same chain). The ASO will use identical radar tabular display settings for each RF set checked for accurate comparison. Radar mode will include both the Doppler and Beyond The Horizon (BTH) radars. A sensor quality check must be made when established in the orbit area if a checkout was made prior to arrival to the orbit area. The radar check will include:

5.3.3.3.2.1. Doppler/BTH Maximum Range. Determine the maximum Doppler range from the situation indicator display presentation using data trails with a minimum 40% blip-scan ratio (3 out of 7 scans have radar returns). A single data point, present or history, may be used to determine the maximum BTH range from the situation indicator display presentation.

5.3.3.3.2.2. Quality. Radar quality is determined by the percentage of all IFF returns within a 250 NM radius of the E-3 that have consistent discernible radar data trails. In addition, consider the overall consistency of the radar presentation. Use the following criteria to assess the overall quality of the radar:

5.3.3.3.2.2.1. Good. Greater than 75%.

5.3.3.3.2.2.2. Fair. Between 50 to 75%.

5.3.3.3.2.2.3. Poor. Less than 50%.

5.3.3.3.2.3. System Counts. On applicable form, log the Doppler, BTH, and Mode 3 counts for comparison of radar frequencies. Time of day, operating location, traffic density areas, and radar mode of operation may significantly affect the ratio of these figures.

5.3.3.3.2.4. Quality Control/Systems Check Out. Once the sensors have been initially checked and declared operational, the ASO is *not* required to re-accomplish a full sensor check unless the applicable sensor system is powered down or if the ART accomplishes a Fault Isolation Test (FIT) on the radar system, i.e. after Quality Control (QC). In circumstances such as post-AAR where sensors are transferred but not powered down, the ASO will, at minimum, accomplish a quality check of radar and IFF systems prior to declaring them operational.

5.3.3.3.3. Radar Setup. The ASO must consider the effects of the E-3 flight parameters on sensor performance and attempt to optimize checkout within these constraints. The assessment of overall air picture quality will be the primary factor in determining the optimum RF set.

5.3.3.3.3.1. After selecting the optimum RF set, the ASO will declare the radar operational.

5.3.3.3.3.2. When multiple E-3 flights operate in an area, the ASO will perform frequency deconfliction as required.

5.3.3.4. Data Link Procedures and Operation. Data link is the primary means of passing E-3 information. Establish data links according to, *Joint Multi-Tactical Data Link (TDL) Operating Procedures,* for the JTIDS Network Library for JTIDS and TADIL A during Continental United States (CONUS) operations. Establish data link operations outside the CONUS according to local theater directives and the OPTASKLINK.

5.3.3.5. Assuming Station. ASO will inform MCC of station assumption requirements not yet completed:

5.3.3.5.1. Conduct data base checks as appropriate.

5.3.3.5.2. IFF configured for mission use.

5.3.3.5.3. Configure the radar settings and optimize sensors for maximum detection while maintaining air-picture quality.

5.3.3.5.4. Track initiation on all data trails within the assigned AOR(s).

5.3.3.5.5. Initiate contact with ground control agencies.

5.3.3.5.6. Operational data link(s).

5.3.3.5.7. PDS Download. The ASO is permitted to download PDS when an ECO is not on-board for the purpose of internal crew PDS displays training. Only an ECO will declare PDS operational. (Note: Without an ECO on-board PDS will not be used for such purposes as signal of interest location, coordination and reporting, electronic identification, and threat warning.

5.3.3.6. Voice Tell and Recording Procedures. When the E-3 is in an environment with units not capable of data link interface, use the following voice tell and recording procedures:

5.3.3.6.1. The E-3 will voice tell priority one, two, and three tracks unless the receiving agency directs cease tell. Tell all other priorities on request only. For this purpose, the following priorities have been established:

5.3.3.6.1.1. Priority One. Hostile/Faker.

5.3.3.6.1.2. Priority Two. Unknown/Pending.

5.3.3.6.1.3. Priority Three. Emergencies.

5.3.3.6.1.4. Priority Four. Defensive Counter Air.

5.3.3.6.1.5. Priority Five. VIP Flights.

5.3.3.6.1.6. Priority Six. Special Missions.

5.3.3.6.1.7. Priority Seven. Other tracks as directed by the receiving agency, (for example, Neutralized Fakers). Live tracks have priority over simulated tracks.

5.3.3.6.2. Voice tell will be in a format agreed upon by both agencies.

5.3.3.7. Electronic Combat Procedures. The ASO will monitor/coordinate EP actions. Use the following procedures:

5.3.3.7.1. The ASO, ECO and ART will coordinate on any unusual sensor activity to determine whether the source is external or internal and type of interface if able. If no

explanation can be determined and the source is external, submit an Air Force Spectrum Interference Reporting System (AFSIRS) report.

5.3.3.7.2. Make every effort in an EA environment to obtain active data on all EA targets. Whenever possible, use cooperative passive tracking. If cooperative support is not available, use self-passive tracking.

5.3.3.7.3. When self-triangulating, to determine if one of several previously active tracking returns is a suspected EA emitter, the AST will extrapolate the suspected track on its last known heading, speed and altitude, before initiating a passive track. If two tracks are used, the ASO will coordinate with the MCC and SD to ensure proper weapons commitment.

5.3.3.7.4. The ASO will keep the MCC and SD advised on status of passive tracks. When the ASO is confident that the passive track has correlated with the jammer's location, notify the SD that the track has "stabilized" and enable display to weapons consoles. In the event of burn-through, the ASO, in coordination with the MCC and IAW ROE, may "validate" the track as a jammer and associate the symbology with active data.

5.3.3.8. Identification. The theater SPINS/ROE will dictate which systems/platforms can complete the ID matrix. Some platforms can fulfill the ID matrix based on their organic capability or based on their integration capability (voice or data link) with other ID-capable platforms. If the E-3 can fulfill the ID matrix and has the ability to declare a contact hostile, any Air Battle Manager (AWO/SD/ASO/ECO/MCC) on board the E-3 can complete the ID matrix. The MCC may restrict this and retain hostile declaration authority or delegate it to the ABM/section leads as mission needs dictate.

5.3.4. Weapons Procedures:

5.3.4.1. Station Assumption. Prior to assuming station for weapons activity, the SD will:

5.3.4.1.1. IAW LOA or when operating as a MRU or ARU, contact FAA/Air Route Traffic Control Center or ground monitor/control authority and complete a sensor correlation check as required.

5.3.4.1.2. Check all weapons assigned radio frequencies for usability.

5.3.4.1.3. Check data base accuracy.

5.3.4.2. On-Station Procedures. Procedures will be according to the operational procedures contained in this instruction and specific mission directives.

5.3.4.3. Off-Station Procedures. The SD will compile controlled aircraft mission totals and furnish this data to the MCC. The SD will pass totals to the ground monitor if requested/directed.

5.3.4.4. SD Control Procedures. The SD may control aircraft during a mission after coordination with the MCC and when simultaneous missions are not in progress.

5.3.4.5. Handoff Procedures. Handoff procedures IAW applicable FAA Letters of Agreement. The SD or a designated AWO will monitor the handoff frequency once performing station assumption duties until termination of aircraft control.

5.3.4.6. Controlled Aircraft Emergency Procedures. For aircraft with in-flight emergencies, the SD/AWO performing the handoff will use the word "Emergency" at the beginning and ending of transmissions to the recovery agency. In the event of an emergency being declared by an aircraft under E-3 control, the AWO will refer to their Aircrew Aids, "Controlled Aircraft Emergency Procedures."

5.3.4.7. Control Procedures. On-station control procedures will be IAW AFI 11-214, Air Operations and Procedures.

5.3.4.8. Airspace. Use of airspace will be IAW FAA JO 7610.4R, Special Operations and appropriate Letters of Agreement.

5.3.4.9. Distressed Aircraft. Report any suspected or triangular distress patterns to the SD.

5.3.4.10. Symbology. During all operations, AWOs will ensure symbology and sensor data of controlled aircraft are within 2 NM of each other. Weapons pairings to Combat Air Patrol (CAP), air-to-air intercept, and ground targets should be accomplished as briefed IAW mission TDL employment.

5.3.5. Communications Procedures:

5.3.5.1. Radio Procedures. Adhere to communications discipline at all times. All crewmembers will use proper International Civil Aviation Organization (ICAO) phrases, phonetic alphabet, R/T procedures outlined in ACP 121, US Sup 2 (*Communications Instructions, General-Air-Ground*), AFTTP 3-1 General Planning, and AFTTP 3-2.5 Multi-Service Brevity Codes.

5.3.5.2. Phone Patches. Units will establish phone patch procedures in their local chapter.

5.3.5.3. Call Signs. Always use the aircraft callsign when transmitting messages of Flight Safety, aircraft movement, and radio calls required by this instruction. Mission crewmembers will use the mission crew call sign when communicating with the respective controlling or monitoring agency, aircraft under their control, or as fragged/briefed. The CSO will brief crewmembers on call signs to use when providing alternate communications.

5.3.5.4. UHF/VHF Guard Monitoring Procedures. The MCC will ensure the mission crew monitors VHF and UHF guard frequencies. The MCC, SD, ECO, and AWOs will have UHF guard receive/transmit programmed to their consoles. While aircraft are under control by the mission crew, the SD will designate at least one weapons crewmember to monitor UHF guard. The ASO, SST, and ASTs will have VHF guard programmed to their consoles. The ASO will designate at least one surveillance crewmember to monitor VHF guard while the E-3 is on station.

5.3.6. Mission Crew Intercom Procedures:

5.3.6.1. The primary means of coordination for the mission crew will be via the programmed mission nets.

5.3.6.1.1. Coordinate net assignments/deviations through the MCC.

5.3.6.1.2. Maintain strict net discipline. Limit conversation to operational matters.

5.3.6.2. Use the ADS selective intercom system for information that is unclassified, lengthy in nature, and/or person-to-person conversations.

5.3.6.3. The PA system is for use in emergencies and practice emergencies. Except for emergency checklist items, use of the PA by mission crew is restricted to the MCC.

5.3.7. Special Interest Track Procedures:

5.3.7.1. A special interest track is any track that requires priority handling by the mission crew.

5.3.7.2. The E-3 will not depart orbit or working area to continue monitoring the special interest track unless directed by the command authority exercising E-3 Tactical Control (TACON). Any instructions that are directive for the E-3 (i.e., leave/move orbit, changes in level of decentralization, etc.) will be authenticated by the MCC/NCCM.

5.3.7.3. The MCC will:

5.3.7.3.1. Ensure the ASO assigns tracking responsibilities for the special interest track.

5.3.7.3.2. Ensure the SD monitors the special interest track for possible intercept actions.

5.3.7.3.3. Coordinate with the ASO and flight crew to maintain the special interest track within the E-3 surveillance limits (orbit location).

5.3.7.3.4. Coordinate E-3 airspace changes (orbit location) with the flight crew, as required.

5.3.7.3.5. Ensure the ECO monitors the special interest track for possible ID correlation.

5.3.7.3.6. Coordinate special interest track procedures with Higher Headquarters (HHQ) as required.

5.3.7.4. The ASO will:

5.3.7.4.1. Give priority attention to the special interest track and assign it to an AST as a specific responsibility.

5.3.7.4.2. Ensure the AST places the track in debriefing status, logs the time, track number, and ID on the appropriate forms.

5.3.7.5. The SD will:

5.3.7.5.1. Monitor the progress of the special interest track and conduct any tactical action on the track as directed.

5.3.7.5.2. Scramble and/or direct aircraft for intercept as directed/necessary.

5.3.7.5.3. After the accomplishment of the intercept, inform the MCC/ground monitor facility of any required information.

5.3.7.5.4. Coordinate with the proper ground unit for recovery of the interceptors.

5.3.7.6. The ECO will:

5.3.7.6.1. Monitor the special interest track and make every effort to correlate all electronic signals emanating from the track.

5.3.7.6.2. Log and/or hard copy, if available, all Augmented Report tabular displays (TDs) for emitters correlated to the track.

5.3.7.6.3. If an ID can be derived from the correlated emitters this information will be passed to the ASO, SD, and MCC.

5.3.8. Sensor Correlation:

5.3.8.1. If control of aircraft is anticipated, accomplish a sensor correlation check prior to assuming station if required by LOA or as specified in FAA Order JO 7610.4R, *Special Military Operations,* if acting as a Military Radar Unit (MRU). If the E-3 mission is surveillance only, the surveillance section will perform the check with the appropriate automated/manual tell agency(ies).

5.3.8.2. Perform an IFF-only correlation check if:

5.3.8.2.1. The ASO subsequently correlates IFF to radar sensor returns.

5.3.8.2.2. IFF only on-station operations are authorized according to this instruction and theater operating instructions IAW FAA Order JO 7610.4R or ATC Letters of Agreement.

5.3.8.3. Coordinate procedures with the responsible MRU prior to assuming station when operating as an Airborne Radar Unit (ARU).

5.3.8.4. When operating in Canada, the E-3 will comply with the DOT/DND agreement (short title, "AWACS Agreement") between Director General Air Doctrine and Operations Department National Defense, and Director Air Traffic Services Department of Transportation.

5.3.8.5. The following procedures apply to sensor correlation checks required by surveillance:

5.3.8.5.1. Minimum of two tracks within the Air Defense Identification Zone (ADIZ), preferably in a non-congested area.

5.3.8.5.2. Voice tell format will include the track number, coordinates, and Mode 3 squawk (if possible). Tracks used must be within 3 NM or less to be considered a good sensor correlation.

5.3.8.5.3. Successful data link correlation checks could be used instead of voice tell checks due to accurate real-time data being passed between both agencies.

5.3.9. Electronic Support Procedures.

5.3.9.1. Coordination. The ECO will coordinate with the MCC, ASO, SD, CDMT/ST, DOW, and Electronic Support Team (EST) to ensure PDS is loaded with an appropriate database. The ECO will also coordinate with the MCC when PDS is downloaded, and operational. In addition the ECO will advise the MCC, CDMT/ST and/or ASO of any system degradation(s).

5.3.9.2. Sensor Management Procedures**.** Prior to assuming station, the ECO will perform checks on PDS to ensure operational status and determine optimal sensor set-up. The ECO will brief the MCC on the results of these checks.

5.3.9.2.1. PDS. At a minimum, the ECO will check:

5.3.9.2.1.1. Reception in Frequency Range. Check to ensure 360-degree reception of signals within all three bands: low, medium and high. This is a subjective check, but there should be several indications within each band on different azimuths.

5.3.9.2.1.2. Triangulation. Triangulation of a known emitter (like ATC radar at a civil airport) is conducted. Once the active emitter file reaches "monitor status," check the location of the triangulated site against the location of the known emitter.

5.3.9.2.1.3. Overload Management (30/35 only). Evaluate any reported overloads and correct as necessary. Overload conditions that cannot be resolved might indicate internal interference and should be corrected IAW established procedures.

5.3.9.3. Data Link Procedures. The ECO should coordinate with the ASO/SST to ensure PDS data link filters are set correctly. The ECO will coordinate with the SIGINT ID Authority (SIA) for selecting specific emitters to tell out during the mission.

5.3.9.4. Reporting Procedures. Reporting procedures will be IAW theater directives and AFTTP 3-1.AWACS.

JOHN W. RAYMOND, Lt Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

A3—Director of Air and Space Operations

AACS—Airborne Air Control Squadron

AAR—Air-to-Air Refueling

AC—Aircraft Commander

ACC—Air Combat Command

ACE—Airborne Command Element

ACG—Air Control Group

ACO—Airspace Control Order

ADIZ—Air Defense Identification Zone

ADS—Audio Distribution System

AFA—Air Force Academy

AFB—Air Force Base

AFRC—Air Force Reserve Command

AFROTC—Air Force Reserve Officer Training Corps

AFSIRS—Air Force Spectrum Interference Reporting System

AFTO—Air Force Technical Order

AGL—Above Ground Level

AHRS—Altitude and Heading Reference System

AO—Area of Operation

AOC—Air Operations Center

AOR—Area of Responsibility

ARCP—AAR Control Point

ARCT—AAR Control Time

ARIP—AAR Initial Point

ARMS—Aviation Resource Management System

ART—Airborne Radar Technician

ARTCC—Air Route Traffic Control Center

ARU—Airborne Radar Unit

ASO—Air Surveillance Officer

ASOC—Air Support Operations Center

AST—Air Surveillance Technician

ATC—Air Traffic Control

ATO—Air Tasking Order

AWACS—Airborne Warning and Control System

AWO—Air Weapons Officer

BMC—Basic Mission Capable

BRNAV—Basic Area Navigation

BTH—Beyond the Horizon

C2—Command and Control

CAF—Combat Air Forces

CAMS—Computer Automated Maintenance System

CAP—Combat Air Patrol

CC—Commander

CCCS—Command and Control Coordinate System

CD—Counterdrug

CDMT—Computer Display Maintenance Technician

CDU—Control Display Units

CFG—Communications Functional Group

CMR—Combat Mission Ready

CG—Center of Gravity

CONUS—Continental United States

CP—Copilot

CPS—Control Power Supply

CRC—Control and Reporting Center

CSC—Central Security Control

CSG—Computer Support Group

CSO—Communications Systems Operator

CT—Communications Technician

DA—Decision Altitude

DETCO—Detachment Commander

DCN—Datalink Control Network

DO—Director of Operations

DR—Dead Reckoning

DRU—Direct Reporting Unit

DV—Distinguished Visitor

EA—Electronic Attack

EC—Electronic Combat

ECO—Electronic Combat Officer

EGI—Embedded GPS INU

EMI—Electro-Magnetic Interference

EOB—Electronic Order of Battle

EP—Electronic Protection

EPR—Exhaust Pressure Ratio

ES—Electronic Support

EST—Electronic Support Team

ESC—Electronic Support Cell

ESM—Electronic Support Measures

ETA—Estimated Time of Arrival

ETD—Estimated Time of Departure

EW—Electronic Warfare

FAA—Federal Aviation Administration

FAF—Final Approach Fix

FCT—Flight Crew Training

FDP—Flight Duty Period

FE—Flight Engineer

FIH—Flight Information Handbook

FIT—Fault Isolation Test

FL—Flight Level

FLIP—Flight Information Publications

FOA—Field Operating Agency

FPM—Feet Per Minute

GINS—Global Positioning System Integrated Navigation System

GPS—Global Positioning System

GTACS—Ground Tactical Air Control System

HF—High Frequency

IAW—In Accordance With

ICAO—International Civil Aviation Organization

ICN—Interface Control Net

ICS—Iridium Chat System

ID—Identification

IDG—Integrated Demand Assigned Multiple Access (DAMA)/ Global Air Traffic Management (GATM)

IFF—Identification, Friend or Foe

IFR—Instrument Flight Rules

IMC—Instrument Meteorological Conditions

INS—Inertial Navigation System

INU—Inertial Navigation Unit

IP—Instructor Pilot (an "I" prefix designates an instructor in that crew position, i.e., IMCC)

JCS—Joint Chiefs of Staff

JFACC—Joint Force Air Component Commander

JICC—Joint Information Coordination Center

JICO—Joint Interface Control Officer

JSTARS—Joint Surveillance Target Attack Radar System

JTAO—Joint Tactical Air Operations

JTIDS—Joint Tactical Information Distribution System

LAT—Latitude

LONG—Longitude

MAC—Mean Aerodynamic Chord

MAJCOM—Major Command

MAP—Missed Approach Point

MCC—Mission Crew Commander

MCS—Mission Computing System

MCT—Mission Crew Training

MDA—Minimum Descent Altitude

MEGP—Mission Essential Ground Personnel

MEL—Minimum Equipment List

MET—Mission End Time (AFRC only)

MRU—Military Radar Unit

MSL—Mean Sea Level

Nav—Navigator

NCCM—NORAD Certified Crewmember

NECOS—Net Control Station

NM—Nautical Mile

NORAD—North American Aerospace Defense Command

NOTAMs—Notices to Airmen

OBS—On-Board Spare

OG—Operations Group

ONC—Operational Navigation Chart

OPCON—Operational Control

OPLAN—Operations Plan

OPORD—Operations Order

OPTASK—Operation Task

OWS—Operator Work Station

PA—Public Address

P-Sortie—Proficiency Sortie

PACAF—Pacific Air Forces

PDS—Passive Detection System

PIC—Pilot in Command

QC—Quality Control

RAIM/FDE—Receiver Autonomous Integrity Monitoring/Fault Detection and Exclusion

RCR—Runway Condition Reading

RF—Radar Frequency

RNAV—Area Navigation

RNP—Required Navigation Performance

ROE—Rules of Engagement

RICO—Regional Interface Control Officer

RP-1—Readiness Posture One

RP-3—Readiness Posture Three

RP-15—Readiness Posture Fifteen

RSC—Runway Surface Condition

RSP—Readiness Spares Package

R/T—Receive/Transmit

RVSM—Reduced Vertical Separation Minimums

SARM—Squadron Aviation Resource Management

SD—Senior Director

SEFE—Standardization/Evaluation Flight Examiner

SICO—Sector Interface Control Officer

SID—Standard Instrument Departure

SIF—Selective Identification Feature

SIM—Simulator/Simulation

SM—Statute Mile

SOF—Supervisor of Flying

SPINS—Special Instructions

SRT—Scheduled Return Time (AFRC only)

SST—Senior Surveillance Technician

ST—Systems Technician

STAR—Standard Terminal Arrival Route

TACAN—Tactical Air Navigation

TACON—Tactical Control

TACOPDAT—Tactical Operation Data

TACS—Theater Air Control System

TCAS—Traffic Collision Avoidance System

TD—Tabular Display

TOLD—Takeoff/Landing Data

TRT—Takeoff Rated Thrust

TSF—Tactical Site Files

TSN—Track Supervision Net

UHF—Ultra-High Frequency

USB—Upper Side Band

USMTF—United States Message Text Format

VDP—Visual Descent Point

VFR—Visual Flight Rules

VHF—Very High Frequency

VIP—Very Important Person

Terms

Aircrew—Use this term to describe the complete complement of personnel required to fly an operational mission. It composes both the flight crew and the mission crew.

Critical Phases of Flight—Critical phases of flight are takeoff, air to air refueling, flight below 5,000 feet AGL, approach, landing, and any other maneuver listed in this instruction requiring IP/SEFE supervision.

Flight Crew—The flight crew is responsible for the safe ground and flight operations of the E-3 aircraft. It consists of an AC, FP or CP**,** Nav, and FE. For purposes of this instruction, Flight Crew Training (FCT) personnel are considered flight crew members; however, contractor personnel will not occupy primary E-3 crew positions during critical phases of flight.

Group Commander—For sorties under AFRC OPCON, the 970th Airborne Air Control Squadron Operations and Training (O and T) officer (or designated representative) acts as the applicable group commander.

Instructor/Standardization Evaluation Flight Examiner (SEFE) Supervision—Instructor/SEFE supervision requires an instructor/SEFE who is qualified and current in the position and the maneuver that will be performed. Individuals not qualified or current in the aircraft, require instructor/SEFE supervision for the activity in which they are unqualified or noncurrent. For unqualified or noncurrent Pilots, IP/SEFE supervision requires the IP/SEFE to be in one of the Pilots' seats with immediate access to the controls while the maneuver is being performed. For all other crewmembers, instructor/SEFE supervision requires over-the-shoulder observation of the unqualified/non-current crewmember. During critical phases of flight, flight crew instructors/SEFEs are allowed to stand, all others will be at the discretion of the PIC.

Mission Crew—The mission crew consists of those individuals responsible for the command, control, surveillance, communications/electronic, and management functions, to include the control and monitoring of assigned aircraft, sensor management, internal and external communications management for mission operations, and onboard systems maintenance. It consists of the Mission Crew Commander (MCC), Senior Director (SD), Air Weapons Officer (AWO), Air Surveillance Officer (ASO), Electronic Combat Officer (ECO), Senior Surveillance Technician (SST), Air Surveillance Technician(s) (AST), Computer Display Maintenance Technician (CDMT)/Systems Technician (ST), Airborne Radar Technician (ART), Communications Systems Operator (CSO), and the Communications Technician (CT).

Mission End Time (MET)—(AFRC only) The scheduled day and time a flight crew is planned to return to home station from an exercise or deployment. The MET will be published in the monthly Operations Plan, rotation schedule, flying schedule, and/or OPORD, as necessary. The MET is the baseline for computing Scheduled Return Time**.**

Mission Essential Ground Personnel—Individual who perform unique support duties directly related and essential to the particular aircraft or mission being flown. The OG/CC (or equivalent) with operational control of the aircraft being flown grants MEGP status.

NORAD Battle Staff—The battle staff assists the crew performing aerial operations within the NORAD area of operations (AO). The battle staff is responsible for managing the air battle and carrying out the required command and control functions. It has the responsibility and authority, as directed by the appropriate commander, to ensure the most effective use of assigned resources to accomplish the mission. The NORAD Certified Crewmember (NCCM) is an ACC/PACAF E-3 crewmember specifically trained to support the NORAD mission. Supported commanders may also provide a NORAD Airborne Battle Commander (NABC) and NORAD Weapons Resource Officer (NWRO). PACAF/AFRC E-3 crewmembers will be trained and certified by local procedures using a command approved syllabus.

Operational Control (OPCON)—Command authority that may be exercised by commanders at any echelon at or below the level of combatant command and may be delegated within the command. OPCON is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish the mission. It should be delegated to and exercised by the commanders of subordinate organizations; normally, this authority is exercised through subordinate Joint Forces Commanders (JFCs), Service, and/or functional component commanders. OPCON provides authority to organize and employ commands and forces as the commander considers necessary to accomplish assigned missions; it does not include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. These elements of combatant command must be specifically delegated by the combatant commander. OPCON does include the authority to delineate functional responsibilities and operational areas of subordinate JFCs.

Squadron Aviation Resource Management (SARM)—The office responsible for, but not limited to publishing flight crew orders, flight and mission crew kits, and tracking the squadron's aircraft locations.

Scheduled Return Time (SRT)—(AFRC only) A force management tool used by the on-scene commander to assure return of the Reserve associate personnel to home station before the expiration of their active duty orders. The SRT is calculated MET plus 24 hours.

Tactical Control (TACON)—An authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish assigned missions or tasks assigned by the commander exercising OPCON or TACON of the attached force. TACON is able to be delegated from a lesser authority than OPCON and may be delegated to and exercised by commanders at any echelon at or below the level of combatant command. TACON provides authority to give direction for military operations and to control designated forces. TACON does not provide the authority to give or change the function of the subordinate commander. TACON provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets within the assigned mission or task. TACON does not provide organizational authority or authoritative direction for administrative and logistic support. Functional component commanders typically exercise TACON over military capability of forces made available for tasking.

Transition—Practice multiple takeoffs, simulated emergency patterns, low approaches and touch and go landings. Transition timing begins when the aircraft crosses the threshold on the first approach.

Wing Commander—For sorties under AFRC OPCON the 513th ACG Commander (or designated representative) acts as the WG/CC.

Attachment 2

E-3 BAGGAGE AND EQUIPMENT LOADING

A2.1. Flight Engineer Responsibilities:

A2.1.1. Verify an AFTO Form 781A entry was made when On-Board Spare (OBS) kits are loaded.

A2.1.2. Ensure the removal of the forward two metal boxes of the OBS kits after arrival at a TDY location, if the stay will be longer than 3 days.

A2.1.3. Ensure only enough cleaning supplies are stored in the galley compartment to clean the area for one mission. Store the remaining cleaning supplies and all onboard bench stock in the dedicated crew chief box in the aft lower lobe.

A2.2. Loading Procedures. The following loading procedures apply to all E-3 operations. For more specific guidelines, refer to the following T.O.s: 1E-3A-1, 1E-3A-5-1, 1E-3A-5-2, and 1E-3A-2-7.

A2.2.1. OBS Kits. An OBS kit consists of as many as five metal boxes and one fiberglass box containing an inertial navigation unit (INU). If maintenance requires OBS kits, install the five metal boxes in the forward lower lobe using the rail system described in T.O. 1E-3A-2-7. Any other method of securing the metal boxes in the forward lower lobe is not acceptable. Secure the INU in the "J" compartment with cargo straps. Weight of OBS kits vary. The actual weight is annotated on each box. The crew chief will be responsible for recording the weights of each box and its location with an AFTO Form 781A entry. For mission planning purposes, use the standard weight of 650 pounds in the forward lower lobe and 127 pounds in "J" compartment. Make adjustments on DD Form 3654 as necessary. After arrival at a TDY location, if the stay will be longer than 3 days, remove at least the forward two metal OBS kit boxes from the aircraft to allow for better access to the area for firefighting, etc., if the location has a means of securing the kits.

A2.2.2. Technical Orders**.** Carry one case of T.O.s when an OBS kit is loaded. Store in the "J" compartment and secure with cargo straps.

A2.2.3. Tool Box:

A2.2.3.1. Secure the inflight tool box carried by the CT in the "J" compartment with cargo straps.

A2.2.3.2. When a crew chief tool box is required; secure it at the tie down point in the aft lower lobe or in "J" compartment with cargo straps.

A2.2.4. Crew Baggage. In order to facilitate loading, crewmembers and PAX will maximize the use of soft luggage (i.e., issued B4, A3, and hang-up bags) for exercises and deployments. Crewmembers should be aware that proper aircraft/loading requires strapping the load down tightly in order to prevent load shifting. Crewmembers are normally allowed a baggage limit of 25 pounds on short term TDYs (7 days or less) and 55 pounds on longer deployments. However, if on mission planning day, weight appears to be critical, the AC and FE will determine the maximum allowable baggage weight and inform crewmembers and passengers of how much they will be allowed to carry. Baggage will be secured at a height

no higher than 40 inches in “J” compartment. Small, carry-on type baggage may be stacked higher that 40 inches provided they are secured at or below 40 inches.

A2.2.5. Jackets and Garment Bags. Jackets and lightweight garment bags may be stored on the clothing rack next to the lavatory.

A2.2.6. SF6. Up to four additional SF6 bottles, empty or full, may be stored in the aft lower lobe. Bottles will be secured in the SF6 storage racks, if the aircraft is modified. If not modified, use cargo straps, and up to four small bottles can be stored.

A2.2.7. RMA Kits. Store RMA kits in the area under the DDI at seat 8.

A2.2.8. Additional Baggage/Equipment. “J” compartment loading will be accomplished IAW T.O. 1E-3A-5-2.

A2.2.9. General:

A2.2.9.1. Mission crewmembers should store professional gear (i.e., pubs/helmet bag) either in “J” compartment or at their individual consoles in a manner that will minimize movement of gear.

A2.2.9.2. Compartment weight limitations will be IAW T.O. 1E-3A-1.

A2.2.9.3. Crew bunks will only be used for storing pillows and blankets which will be secured by seatbelts. Nothing will be stored beneath the bunks. Floor rings used to secure bunks to the floor will not be used for luggage/equipment tie down.

Attachment 3

E-3 PASSENGER BRIEFING GUIDE

A3.1. Required Briefing Items. The following items are required briefing items unless individuals have been previously briefed during the pre-mission briefing**:**

A3.1.1. AC/MCC names.

A3.1.2. ETA to destination.

A3.1.3. Cruise altitudes.

A3.1.4. Weather enroute and at destination.

A3.1.5. 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 area.

A3.2.2. Crash Landing/Ditching:

A3.2.2.1. Signal for preparation.

A3.2.2.2. Signal to brace for impact.

A3.2.2.3. Brace position.

A3.2.3. Loss of Pressure:

A3.2.3.1. Signal.

A3.2.3.2. Oxygen requirements.

A3.3. Oxygen/Survival Equipment:

A3.3.1. How to check/use assigned oxygen source.

A3.3.2. LPU—fitting and use (if applicable).

A3.3.3. Survival suit—use (if applicable).

A3.4. Restrictions:

A3.4.1. Reading lights.

A3.4.2. Lavatory.

A3.4.3. Seat belts.

A3.4.4. Bunks.

A3.4.5. Smoking and smokeless tobacco are prohibited.

A3.4.6. Operation of electric/electronic devices (except watches, hand held non-print calculators, hearing aids, medically prescribed physiological instrumentation, and portable voice recorders when approved by MAJCOM) will be IAW AFI 11-202V3. Electronic flash attachments will not be used.

A3.4.7. Transportation or use of narcotics, marijuana, or other dangerous drugs is prohibited unless approved by proper medical/legal authority.

A3.4.8. Explosive, flammable and corrosive materials, or materials with toxic or irritating fumes are prohibited unless approved by competent authority.

A3.5. Galley Area:

A3.5.1. Restrictions during refueling.

A3.5.2. Oven use.

A3.5.3. Coffee.

A3.5.4. Water.

A3.5.5. Flight lunches.

A3.5.6. Noise.

A3.6. Miscellaneous:

A3.6.1. Follow E-3 crewmember instructions at all times.

A3.6.2. If passengers are onboard during the crew coordination drill, passengers will be briefed but will not participate.