COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements guidance in AFPD 11-2, *Aircraft Rules and Procedures*; AFPD 11-4, *Aviation Service*; and AFI 11-202V1, *Aircrew Training*. It establishes the minimum standards for training and qualifying personnel performing duties in the E-4. This publication does not apply to Air National Guard or Air Force Reserve Command units and members. MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/DISA, for approval prior to publication IAW AFPD 11-2, paragraph 4.2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ USAF/XOOT, HQ ACC/DISA, and user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms Direct Reporting Unit (DRU) and Field Operating Agency (FOA) as used in this paragraph refer only to those DRU/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360V1, *Publications Management Program*.

This instruction requires the collection or maintenance of information protected by the Privacy Act of 1974. The authority to collect and maintain the records prescribed in this instruction are 37 USC 301a, Incentive Pay; Public Law 92-204 (Appropriations Act for 1973), Section 715; Public Law 93-570 (Appropriations Act for 1974); Public Law 93-294 (Aviation Career Incentive Act of 1974); DOD Directive 7730.57, Aviation Career Incentive Act and Required Annual Report; Air Force Instruction 11-401, *Flight Management*; and E.O. 9397. System of records notice F011 AF XO A, Air Force Operations Resource Management System (AFORMS) applies. The reporting requirements in this instruction are exempt from licensing IAW paragraph 2.11.10 of AFI 37-124, *The Information Collection and Reports Management Program*; *Controlling Internal, Public, and Intraagency Air Force Information Collections.*

Chapter 1

E-4 AIRCREW TRAINING PROGRAM

1.1. Responsibilities:

1.1.1. HQ ACC:

1.1.1.1. DIS is overall OPR for this instruction and processes all changes to this instruction. Proposed changes to this instruction are submitted IAW AFPD 11-2.

1.1.1.2. DIS sponsors periodic meetings to review ground and flying training requirements. Participants should include representatives from HQ ACC and 55 WG.

1.1.1.3. IAW AFPD 10-9, *Lead Operating Command Weapon Systems Management*, ACC is designated lead command for the E-4. Among the many duties of a lead command are establishing standards, tasks, and formal training requirements.

1.1.2. 55th Wing/55th Operations Group will:

1.1.2.1. Assist subordinate unit in management of training programs, ensure programs meet unit needs, and provide necessary staff support. Develop programs to ensure training objectives are met.

1.1.2.2. If applicable, forward supplements to this instruction and other supporting documents to the MAJCOM for review. Review supplements annually.

1.1.2.3. Identify training shortfalls that adversely impact combat capability through appropriate channels.

1.1.3. The squadron commander will:

1.1.3.1. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned/attached crew members.

1.1.3.2. Ensure review of training and evaluation records of assigned crew members to determine the training required for them to achieve Basic Mission Capable (BMC) or Combat Mission Ready (CMR) and to ensure provisions of this instruction have been met.

1.1.3.3. Provide guidance to ensure only effective RAP missions are logged as RAP sorties.

1.1.3.4. Determine missions/events in which individual BMC crew members will maintain qualification versus familiarization.

1.1.3.5. Identify the levels of supervision required to accomplish the required training, unless specifically directed.

1.1.3.6. Assist the wing/group in developing the unit training programs.

1.1.4. Flight commanders will ensure crew members only participate in sorties, events, and tasks for which they are adequately prepared, trained, and current.

1.1.5. Crew members will:

1.1.5.1. Hand carry all available training records to assist the gaining unit in assessing qualifications and training requirements.

1.1.5.2. Be responsible for completion of training requirements within the guidelines of this instruction.

1.1.5.3. Ensure they participate only in activities for which they are qualified and current.

1.2. Processing Changes:

1.2.1. Forward recommendations for change to this instruction to MAJCOM on AF Form 847, **Recommendation for Change of Publication.** AF/XO approves interim changes.

1.2.2. HQ ACC/DO will:

1.2.2.1. Process recommendation for change.

1.2.2.2. Address time sensitive changes by immediate action message.

1.3. Minimum Requirements for Assignment to Perform E-4 Crew Duties:

1.3.1. Pilots will be currently qualified in Tanker/Transport/Bomber (TTB) jet aircraft or a previously qualified pilot in the E-4, have 2,500 hours total time and 1,500 hours TTB jet aircraft time with current or previous TTB jet receiver air-refueling experience, and be able to obtain a Top Secret/Sensitive Compartmentalized Information (TS/SCI) clearance.

1.3.2. Navigators will be currently qualified in TTB aircraft, have 2,000 hours of total time and 1,000 hours in TTB aircraft with previous air refueling experience (tanker or receiver), and be able to obtain a TS/SCI clearance.

1.3.3. Flight engineers (FEs) will be currently qualified instructors with 3,000 hours FE time, have 48 months retainability upon completion of Mission Qualification Training (MQT), be a 7-level (craftsman), and be able to obtain a TS clearance.

1.3.4. In-flight Passenger Service Specialists must be grade E-4 through E-7 and have 48 months retainability upon completion of MQT and be eligible for a TS clearance.

1.3.5. Airborne Communications Specialty (Semi-Automatic Switching System [SASS], Data, Radio, Radio Maintenance, Tech Control, Dual Trailing Wire Operators), and Super High Frequency Operators must satisfy the requirements of AFI 36-2110, *Airman Assignments.*

1.4. Training. Training is designed to progress the crew member from Initial Qualification Training (IQT) or Transition/Re-Qualification Training (TX) (Phase I), through Mission Qualification Training (MQT) (Phase II), and finally to Continuation Training (CT) (Phase III).

1.4.1. IQT qualifies crew members in a basic crew position and flying duty without regard to the unit's mission. There are no positions in the E-4 that qualify individuals as Basic Aircraft Qualification (BAQ).

1.4.2. MQT qualifies a crew member in the E-4 mission. The E-4 training program combines IQT and MQT in one course of study. The single flight evaluation advances crew members from Unqualified (UQ) to CT.

1.4.3. CT allows crew members to maintain combat capability, increase proficiency, and consists of mission-related training. CT crew members are designated BMC or CMR.

1.4.4. Ready Aircrew Program (RAP) is the CT program designed to focus training on capabilities needed to accomplish the E-4 mission.

1.4.4.1. CMR. All 1 Airborne Command Control Squadron (ACCS) flying positions, including Commander (CC) and Director of Operations (DO) are designated CMR positions. The OG/CC may designate staff positions outside the 1 ACCS as CMR. CMR crew members maintain proficiency and qualification in the 1 ACCS mission. Failure to complete CMR required training results in designation as Non-CMR (N-CMR).

1.4.4.2. BMC. All positions not addressed in para. **1.4.4.1.** are designated BMC positions. BMC positions are filled by crew members whose primary job is group/wing/NAF/MAJCOM staff support of the flying operation. These crew members provide additional sortie generation capability, either in lieu of or in addition to CMR personnel. BMC crew members maintain familiarization with all missions. They also maintain proficiency in the alert mission. For those missions in which they maintain familiarization only, BMC crew members must be able to attain proficiency and qualification in 30 days or less. BMC crew members accomplish all ground training designated by the 1 ACCS/CC. Failure to complete BMC required training results in regression to Non-BMC (N-BMC) status.

1.4.4.3. N-CMR/N-BMC. Crew members designated N-CMR/N-BMC are not combat ready and must accomplish a tailored training plan to regain CMR/BMC. Crew members are designated N-CMR/N-BMC for failure to meet ground training, annual flight training, or sortie lookback requirements IAW **Table 1.2.**

1.4.4.4. Unqualified (UQ). Unqualified crew members require training and a flight evaluation to reach the next qualification level. Crewmembers may be designated UQ for the following reasons:

1.4.4.4.1. Enrolled in Initial Qualification Training (IQT) or Requalification Training.

1.4.4.4.2. Non-Current IAW AFI 11-202V1.

1.4.4.4.3. Demonstrated lack of ability.

1.4.4.4.4. Downgraded for failure to meet standards during a flight evaluation.

1.4.4.5. Aircrew Experience Level. There are two experience levels for CT crew members: "Inexperienced" and "Experienced."

1.4.4.5.1. "Inexperienced" crew members have the least amount of experience in their position. They gain more experience through additional training to increase their proficiency.

1.4.4.5.2. "Experienced" crew members require less training to maintain proficiency.

1.4.4.6. Experience Level Progression. The commander designates crew members "experienced" based on progression guidelines and demonstrated proficiency. Document experience and RAP level in Section I of the training folder.

1.4.4.6.1. Experienced pilots should have 200 hours primary E-4 time.

1.4.4.6.2. Experienced navigators should have 200 hours primary E-4 time.

1.4.4.6.3. Experienced flight engineers should have 400 hours primary E-4 time.

1.4.4.6.4. Experienced in-flight passenger service specialists should have 100 hours primary E-4 time.

1.4.4.6.5. Experienced communication control officers and airborne communications specialists should have 100 hours of primary E-4 time.

1.4.4.6.6. Experienced mission system crew should have 50 hours primary E-4 time or 6 months as a System Engineer (SE).

1.4.4.7. Instructor/Evaluator Qualified. Instructors/evaluators who become N-CMR/N-BMC may be allowed to continue academic and/or ATD instructor/evaluator duties with 55 OG/CC approval.

1.4.4.8. Special Capabilities and Qualifications. Special capabilities and qualifications are not separate qualification levels. Under the RAP, units are required to carry crew members trained to special capabilities or qualifications to meet all training requirements. The nature of the capability or qualification either precludes or does not require training the entire unit. Sortie requirements specified for a special capability are over and above the individual qualification sortie requirement unless otherwise noted. CMR and BMC crew members may carry special qualifications. Additional sorties, associated events, and qualifications must be accomplished for a designated special capability. Special qualifications in the 1 ACCS are instructor, evaluator, alert aircraft commander, and functional check flight crew member.

1.5. Training Concepts and Policies:

1.5.1. Design training programs to achieve the highest degree of combat readiness consistent with flight safety and resource availability. Training must balance the need for realism against the expected threat, crew member capabilities, and safety. This instruction provides training guidelines and policies to be used with operational procedures specified in applicable publications.

1.5.2. ACC Training Support Squadron will develop and validate training programs when tasked by HQ ACC.

1.5.3. Design training missions to achieve combat capability in squadron tasked roles, maintain proficiency, and enhance mission accomplishment and safety. RAP training missions should emphasize scenarios that reflect procedures and operations based on employment plans, location, current intelligence, and opposition capabilities.

1.5.4. In-flight Supervision:

1.5.4.1. The following personnel must be under the direct supervision of an instructor when performing crew member duties.

1.5.4.1.1. Unqualified crew members.

1.5.4.1.2. Crew members performing event(s) to regain currency.

1.5.4.1.3. Crew members performing mission/special qualification training sorties.

1.5.4.1.4. Supervisory personnel defined in AFI 11-401, *Flight Management*.

1.5.4.1.5. Crew members designated N-CMR/N-BMC.

1.5.4.1.6. Any senior officer who has not completed initial qualification training requirements of **Chapter 2** including an appropriate flight evaluation.

>   **Note.** This paragraph does not preclude the wing or group commander from requiring other staff personnel to fly with an instructor.

1.5.5. Training Event Tables. Assign crew member training tables according to their experience designation and RAP level.

1.5.6. When experience designation or RAP level changes, prorate new training requirements from the date of certification.

1.5.7. The aircrew training cycle is 12 months; 1 July through 30 June.

1.5.8. Crew members will not be required to accomplish ground or ancillary training except as required by this instruction or AFI 36-2201, *Developing, Managing, and Conducting Training.*

1.6. Ready Aircrew Program (RAP) Policy and Management:

1.6.1. Each RAP qualification level is defined by a total number of RAP sorties, broken down into mission types, plus specific qualifications and associated events as determined by the MAJCOM and unit commanders.

1.6.2. The primary means of assessing crew member qualification is the monthly RAP sortie requirement. The breakout of sortie/mission types is provided as a guideline to be closely followed, but minor variations are expected. Shortfalls in the monthly sortie requirement are the basis for regression. The squadron commander determines mission qualification after considering ACC guidance and the individual's capabilities.

1.6.3. An effective RAP training sortie requires accomplishing a tactical mission profile or a building block type sortie.

1.6.4. The squadron commander's first priority should be to train all designated crew members to CMR.

1.6.5. Progression from BMC to CMR requires:

>   1.6.5.1. A 1-month lookback meeting the higher sortie rate.

>   1.6.5.2. Qualification in all missions, specialized mission training required at CMR levels and confirmation that the progressed crew member can complete the prorated number of event requirements to remain CMR at the end of the training cycle.

>   1.6.5.3. Completion of mission-related ground training.

>   1.6.5.4. Squadron commander certification.

1.6.6. Three-month Lookback. **Table 1.2.** defines the monthly sortie requirement for a crew member to remain mission ready. If a crew member fails to accomplish the monthly sortie requirement, review sortie accomplishment over the last three months. Failure to achieve the three month sortie requirement results in designation as N-BMC or N-CMR. If the crew member does not have three months of flying experience, the one-month lookback requirement must be satisfied.

1.6.7. The squadron commander directs crew members to maintain special capabilities or qualifications. Specialized training may require training beyond baseline CMR/BMC requirements.

1.6.8. End of Cycle training requirements are based on the training tables assigned on the last day of that training cycle.

1.7. RAP Sortie Program Development:

1.7.1. RAP sortie and event requirements apply to all CT crew members.

1.7.2. Non-RAP requirements are in addition to RAP requirements. These sorties ensure basic crew member skills are maintained.

1.7.3. Collateral or cost of business sortie requirements must be considered when developing unit flying hour programs. These sorties are not directly related to combat employment training but are necessary in day to day unit operations. These include but are not limited to ferry flights, incentive flights, deployments, and air shows.

1.7.4. Unit flying hour programs are designed to compensate for non-effective training sorties. Training sorties are non-effective when a major portion of planned training is not accomplished due to weather, air aborts, etc. In order to accurately allocate E-4 flying hours, it is essential that lost training events and reasons for loss are accurately logged on the Mission Accomplishment Report (MAR).

1.8. Training Records and Reports. Maintain aircrew records for individual training and evaluations IAW AFMAN 37-139, *Records Disposition Schedule,* AFI 11-202V2, *Aircrew Standardization/Evaluation Program,* and appropriate MAJCOM directives.

1.8.1. Document and maintain crew member certification/upgrade training in individual training folders IAW AFMAN 37-139.

1.8.2. Prepare and forward training reports IAW MAJCOM directives.

1.8.3. AFORMS will maintain flying and ground training records IAW AFI 11-401. Use AFORMS forms prescribed in AFI 11-202V1 to document training in AFORMS.

1.8.4. Training Accomplishment Report (TAR):

1.8.4.1. A computer generated TAR may be used to document all scheduled and accomplished training except continuation training. Grades for each event are assigned according to the skill level criteria found in **Table 1.1. NOTE:** Should the computer generated TAR become unavailable for use, the 1 ACCS is authorized to use AF Form 4023, **Aircrew Training Progress Report,** AF Form 4024, **Aircrew Training Accomplishment Report,** and AF Form 4025, **Aircrew Summary/Close Out Report** to document and track aircrew training.

1.8.5. Close-out/Summary TAR:

1.8.5.1. For each formal training program the individual completes, a close-out TAR will be completed detailing the individual's overall performance in the program, highlighting weaknesses and strengths. During the training folder review process the squadron commander will review the close out TAR comments and make additional comments if he or she desires. This TAR will be filed along with the other records for that training program. The close-out TAR is critical to maintaining a meaningful history of an individual's training performance.

1.8.6. Training Folder Management:

1.8.6.1. Create training folders for all training except CT. Maintain folders for 1 year after completion of training. Training folders will be accessible to instructors. Folders will not be reviewed by evaluators prior to AFI 11-202V2 evaluations.

1.8.6.2. The standard training folder will consists of three sections. Any standard folder with at least three sections will suffice, however, make every attempt to use the same style folder for every student. The old standard six-part brown training folders are preferred and easily modified to three sections.

1.8.6.2.1. Section 1. Review Administration. This section lists type training, start date, required completion date, actual completion date, and primary instructor. Include certification blocks for folder review by chief of training, branch chief, and commander. Document special certifications in this section.

1.8.6.2.2. Section 2. Training. File all the TARs for the training program, including close-out TAR here. Store in reverse chronological order. File close-out TAR in the individuals' Flight Evaluation Folder (FEF) and purge the other TARs one year after training completion.

1.8.6.2.3. Section 3. Waivers. File any waivers permanently in this section.

1.9. Crew Member Utilization Policy:

1.9.1. Commanders will ensure crew members fill authorized positions IAW unit manning documents and that crew member status is properly designated. The overall objective is that crew members perform combat-related duties. Supervisors may assign crew member to valid, short-term tasks (escort officer, FEB/mishap board member, etc.), but must continually weigh the factors involved, such as level of crew member tasking, flying proficiency, currency, and experience. For inexperienced crew member in the first year of their initial operational assignment, supervisors will limit the non-flying duties to those related to combat activities.

1.9.2. The following duties will not be assigned at the squadron level: AF Suggestion Program Monitor, Weapons/Explosive Safety Manager, and Operations Security (OPSEC) Monitor.

1.9.3. Duties required by various publications that may be assigned to unit crew member are weapons and tactics officer, programmer, flying safety officer, Supervisor of Flying (SOF), mobility/contingency plans, training (except AFORMS documentation), squadron Standardization/Evaluation Liaison Officer (SELO), squadron life support officer, electronic combat officer, and other duties directly related to flying operations. In some instances, crew members may be attached to the wing, group, or the Operations Support Squadron. The commander will ensure these crew members perform duties justified in MAJCOM manpower standards documents and authorized in Unit Manning Documents (UMD).

1.9.4. Crew members will normally not be assigned to perform the following squadron non-flying additional duties: building custodian, unit Communications Security (COMSEC) program monitor, disaster preparedness monitor, enlisted career advisor, functional area records manager, fund/campaign manager, unit ground safety program monitor, information officer, Individualized Newcomer Treatment and Orientation (INTRO) monitor, resource advisor, cost center manager, records technician, Freedom of Information Act monitor, Privacy Act officer, security manager, telephone control monitor, vehicle control monitor, voting advisor, enlisted advisory council representative, human resources counsel representative, squadron executive officer, unit historian, weight control program monitor, and small computer program monitor.

1.10. Sortie Allocation Guidance:

1.10.1. Inexperienced crew members should receive sortie allocation priority over experienced crew members. Priority for sortie allocation is CMR, MQT, and BMC.

1.11. Waiver Authority:

1.11.1. Unless noted otherwise, waiver authority for requirements of this instruction is HQ ACC/DIS.

1.11.2. Forward waiver requests through: 55 OG/CC, 55 WG/CC, 12 AF/CC, and HQ ACC/DIS.

1.11.3. Waivers to this instruction will be valid for no more than 1 year.

1.11.4. Submit an annual report of all incomplete training to MAJCOM (info copy to NAF/DO) by 31 July.

Table 1.1. Performance Grading Criteria.

GRADE	EXPLANATION OF GRADE
LEVEL 1	**Extremely Limited** - Individual can do most activities only after being told or shown how.
LEVEL 2	**Partially Proficient** - Individual can do most of the behaviors, but not necessarily to the desired levels of speed, accuracy, and safety.
LEVEL 3	**Proficient** - Individual can do and show others how to do the behavior in an activity at the minimum acceptable levels of speed, accuracy, and safety without assistance.
LEVEL 4	**Highly Proficient** - Individual can do behaviors in an activity at the highest level of speed, accuracy, and safety.

Table 1.2. Sortie/System OPS Requirements.

Pilot/Navigator/Flight Engineer/IPSS	**RAP Level**			
	BMC		**CMR**	
	I	**E**	**I**	**E**
Monthly Sortie Requirements*	**3**	**2**	**4**	**3**
3 Month Lookback	**6**	**3**	**16**	**9**
Mission Systems/ Communications Crew	**RAP Level**			
	BMC		**CMR**	
	I	**E**	**I**	**E**
Monthly Sortie Requirements*	**1**	**1**	**1**	**1**
3 Month Lookback	**3**	**3**	**3**	**3**
NOTE: I-Inexperienced/E-Experienced				
* Lookback requires 1 RAP sortie per month.				

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. Scope.   This chapter contains prerequisites and minimum training requirements necessary to prepare prospective crew members to perform duties in the E-4 aircraft.

2.2. Time Period to Qualify:

2.2.1. All time limitations specified in **Table 2.1.** begin on the date of the first aircraft flight after entry into a training program. For pilots and flight engineers, this will be the FAA Type I aircraft check flight. For mission crew multiple position qualification, the time limits apply to each position's initial qualification period, which may run concurrently.

2.2.2. Extension of Time Limits.   Time limits may be extended by:

2.2.2.1. Number of days on emergency leave

2.2.2.2. Number of days on Duty Not Including Flying (DNIF) status.

2.2.2.3. Number of days TDY (not involving flying).   Individuals in formal training under the provisions of this manual should not be sent TDY unless it is absolutely necessary. Requests to interrupt training with TDY will be approved by the 1 ACCS/CC.

2.2.2.4. Number of days awaiting issuance of security clearance.   Provide as much training as possible while awaiting security clearance.

2.2.3. After entry into formal training, individuals will not normally be granted ordinary leave until such training is completed. Exceptions to this policy must be approved by the 1 ACCS/CC and documented in the individual's training folder.

2.3. Ground/Flying Requirements:

2.3.1. Pilots and flight engineers complete a FAA approved commercial training course for Boeing 747 aircraft, followed by in-unit initial qualification training specified in **Table 2.2.**

2.3.1.1. FAA approved commercial training course.

2.3.1.1.1. Ground training consists of Aircraft General, Systems, Normal Procedures, Abnormal/ Emergency Procedures, and Flight Simulator per contract. The flight simulator will allow pilots 50% time in both seats with the flight engineer performing panel operation half of the time and observing the other half.

2.3.1.1.2. Satisfactory completion of a flight simulator and aircraft evaluation.

2.3.2. Navigators receive initial qualification in-unit in accordance with **Table 2.2.**

2.3.3. In-flight Passenger Service Specialists complete a FAA approved formal training course administered by a commercial Boeing 747 operator followed by in-unit initial qualification training specified in **Table 2.2.**

2.3.4. Communication Control Officers, Airborne Communication Specialty, and Mission System crew members receive IQT/MQT or TX/MQT in-unit IAW **Table 2.3.** and **Table 2.4.** as applicable.

For Mission System crew members the TC-1 position is the preferred starting point for initial qualification unless mission requirements dictate otherwise.

2.3.5. Academic training should be completed prior to flight training and will be accomplished in accordance with initial qualification training requirements of **Table 2.2.**, **Table 2.3.**, or **Table 2.4.**

2.3.6. Individuals will be recommended for evaluation by an instructor of like specialty. The individual's upgrade monitor will review the training records prior to the evaluation to ensure all appropriate training has been completed and documented.

2.4. Requalification. All individuals requalifying in the E-4 will accomplish training prescribed in **Table 2.1.**, **Table 2.2.**and **Table 2.3.** as well as**Table 3.1.**, **Table 3.2.**and **Table 3.3.**, as applicable. Pilots and flight engineers will also accomplish GS09. Refer to AFI 11-202V1 for requalification criteria.

2.4.1. For Pilots and Flight Engineers non-current in excess of three years will have their records reviewed by the 1 ACCS/CC to determine if attendance of a FAA approved training course is required.

2.4.2. Navigators, In-flight Passenger Service Specialists, Communication Control Officers, Airborne Communication Specialty, and Mission System crew members non-current in excess of three years will be requalified in-unit. Waivers are not required since these crew members receive all their training in-unit.

2.4.3. Academic training will be completed prior to starting flight training.

Table 2.1. Initial Qualification Time Limits (All).

CREW SPECIALTY	TIME LIMIT (Days)
Pilot	120
Navigator	90
Flight Engineer	120
In-flight Passenger Service Specialist	90
Communication Control Officer	120
Airborne Communications Specialist-SASS *	90
Airborne Communications Specialist-Radio	120
Airborne Communications Specialist-Data A/B	120/60
Dual Trailing Wire Operator	120
Radio Maintenance 1	120
Radio Maintenance 2	180
SHF Maintenance/Operator	150
Technical Control 1 **	120
Technical Control 2	120
Instructor	60

CREW SPECIALTY	TIME LIMIT (Days)
* Students will complete all ground training and have a valid TS/SCI clearance before ACS-S IQT is started.	
** TC-1 is the preferred entry level qualification position unless mission requirements dictate otherwise.	

Table 2.2. Initial Qualification Training Requirements P/N/FE/IPSS.

CODE	TRAINING EVENT	P	N	FE	IPSS
AA21	AFI 11-202V2 Qualification Evaluation	1	1	1	1
AG01 *	E-4 Systems Course	1	1	1	1
AP09	Enroute Descent	P			
AP20	ILS (Manual)	P			
AP22	Category II ILS	P			
AP26	Missed Approach (Manual)	P			
AP27	Missed Approach (Autopilot)	P			
AP30	Circling Approach	P			
AP31	NDB Approach	P			
AP39	Instrument Approach/Missed Approach simulated engine-out	P		P	
AP40	PAR	P			
AP51	Holding Pattern	P			
AP56	Approach (Monitored)		P		
AP68	Visual Pattern	P			
AP90	Category II/IIIa Certification	P			
DP05	Instrument Departure	P			
GA03 *	AntiHijacking Procedures	1	1	1	1
GA23**	CRM (Cockpit Resource Management)	1	1	1	
GA48	CPR				1
GS05	Food Handlers				1
GS14	Briefing and Control of Passengers				P
GS16	Pre-takeoff Procedures				P
GS18	Post Flight Procedures	P	P	P	P
GS20*	Aircraft Systems and Equipment Operation	1	1	1	1
GS26	Checklist Procedures/Use	P	P	P	P
GS35	IRC	1	1		
GS37	Proficiency Exam	1	1	1	1

CODE	TRAINING EVENT	P	N	FE	IPSS
GS38	Emergency Procedures Exam	1	1	1	1
GS70	Emergency Procedures	P	P	P	P
GS71	Forms Knowledge	P	P	P	P
GS72	Menu Planning				P
LD01	Landing, Day	P		P	
LD02	Landing, Night	P		P	
LD11	Touch and Go Landing	P		P	
LD14	Landing, Reverse Thrust	P		P	
LD33	Approach/Landing, Full Stop simulated engine-out	P		P	
LD41	Category II or IIIA Autoland	P		P	
LS06*	Life Support Equipment (LSE)Training	1	1	1	1
LS08*	Egress Training, Non-ejection	1	1	1	1
ME19	Mission Planning/Briefing	P	P	P	P
ME20	Crew Coordination	P	P	P	P
ME92	Air Stair Operation	P	P	P	P
ME94	Descent Procedures	P	P	P	P
NE01	Systems Navigation Leg		P		
NE04	Celestial Position		P		
NE11	General Navigation		P		
NE14	INS/INU Continuous/Manual Update		P		
NE15	INS/INU Bearing/Distance Update		P		
NE22	Continuous Three INS Mixing/INU Differential Updating		P		
NE36	INS/Flight Management System (FMS) Operation		P		
NE90	Celestial Heading Check		P		
ST00	Sortie	P	P	P	P
TO00	Takeoff	P		P	P
TO22	Climb Procedures	P	P	P	P
TO25	Takeoff Engine Failure After V1	P		P	
TO26	Departure (Monitored)		P		
*Must be completed prior to first flight.					
**AA21 may be conducted prior to GA23. Complete GA23 as soon as training is available.					

Table 2.3. IQT/MQT or TX/MQT Requirements, ACS-S, CCO.

CODE	DESCRIPTION	ACS-S	CCO
AA21	AFI 11-202V2 Qualification Evaluation	1	1
AG01	E-4 Systems Course	P*	P*
AG05	Regulation and Directive Orientation	P	P
CE01	Console Equipment\Controls	P	P
CE02	Internal Communications Systems	P	P
CE04	UHF Command Radio System		P
CE05	Call Processing	P	P
CE06	UHF Sat Voice Radio System		P
CE07	HF Communication System		P
CE10	UHF Networks	P	P
CE11	Special User Systems		P
CE12	Secure Voice System		P
CE14	DSCS ECCM Networks		P
CE15	MWTTY		P
CE16	SCT Networks		P
CE17	HF Networks		P
CE18	PSM Procedures		P
CE19	UHF SATCOM (AFSAT)		P
CE20	Secure Data Circuits		P
CE21	MPS Procedures		P
CE23	UHF DAMA System		P
CE24	EHF System		P
CE25	EHF Net Procedures		P
CE27	Force Report Back Procedures		P
CE28	Encryption/Decryption/Authentication		P
CE29	Operational Procedures	P	P
CE30	EAM Procedures		P
GA03	Anti-Hijacking Procedures	1*	1*
GA13	COMSEC**	P*	P*
GS20	Aircraft Systems and Equipment Operation	1*	1*
GS26	Checklist Procedures/Use	P	P
GS37	Proficiency Exam	1*	1*
GS38	Emergency Procedure Exam	1*	1*
GS70	Emergency Procedures	P*	P*

CODE	DESCRIPTION	ACS-S	CCO
LS06	LSE Training	1*	1*
LS08	Egress Training, Non ejection	1*	1*
ME19	Mission Planning/Briefing	P	P
ME20	Crew Coordination	P	P
ST00	Sortie	1	1
*Denotes ground training event.			
**Individuals need to possess a TS/SBI clearance for this event.			

Table 2.4. IQT/MQT or TX/MQT Requirements--TC-1, TC-2, RM-1, RM-2, DTWAO, SHF.

CODE	TRAINING EVENT	All Positions
AA21	AFI 11-202V2 Qualification Evaluation	1
AG01	E-4 Systems Course	1
AG05	Regulation and Directive Orientation	P
GA03	Anti-Hijacking Procedures	1
GA13	COMSEC	1
GS20	Aircraft Systems and Equipment Operation	1
GS30	Alert Procedures	1
GS37	Proficiency Exam	1
GS38	Emergency Procedure Exam	1
GS70	Emergency Procedures	1
GS71	Forms Knowledge	1
LS06	LSE Training	1
LS08	Egress Training, Non-ejection	1
Note. IQT can be in any of the above positions. The requirements below must be completed first, then continue position training on the events listed in**Table 3.3.**.		

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. Scope. This chapter prescribes requirements an individual must accomplish to complete Mission Qualification.

3.2. Mission Qualification Training. Table 3.1., **Table 3.2.**, and **Table 3.3.** list training that must be completed by a crew member before the squadron commander can declare the individual "CMR." MQT may be accomplished concurrently and dual credited with other training requirements in this instruction.

3.3. Alert Participation. Only CMR crew members will be placed on alert. Unqualified crew members with proper clearance may be attached to the alert crew for training purposes and are not considered part of the alert team. Individuals declared CMR but subsequently delinquent in ME21 and/or LD11 may be placed on alert.

Table 3.1. Mission Qualification Training Requirements P/N/FE/IPSS.

CODE	TRAINING EVENT	P	N	FE	IPSS
AP90	Cat II/IIIA Certification	1			
AR14	RCVR A/R Tanker AP Off	P			
AR15	Receiver Rendezvous	P	P		
AR25	Receiver Air Refueling	P		P	P
AR27	Point Parallel Rendezvous		P		
AR30	RCVR RZ Overrun Proc	P	P		
AR32	Enroute Rendezvous		P		
AR44	Receiver A/R Night	P			
AR46	RCVR A/R Breakaway Proc	P	P	P	
GS10	Alert Start Procedures	P		P	
GS30	Alert Procedures	P	P	P	P
GS42	SIOP Study	1	1	1	
GS44	SIOP Mission Certification	1	1	1	
LD10	Landing, Short Field	P			
ME30	Alert/Training Taxi Exercise	P	P	P	P
ME91	Block Time Control Exercise	P	P		
ME93	Helo RZ Proc	P	P	P	P
NE21	TWA Activity	P	P	P	

Notes:

1. AP90 will be accomplished in conjunction with AA21.

2. For pilots, proficiency is required in event LD01 before LD10.

3. For pilots in IQT, GS10, GS30, ME30 and ME93 will be accomplished in the right seat.

4. Pilots, flight engineers, and in-flight passenger service specialists log AR25 when pilots accomplish AR44.

5. Requalification pilots must attain proficiency in LD10 and ME91 from the left seat. No proficiency in LD10 or ME91 is required from pilots in IQT/MQT. Proficiency in these events will be demonstrated as part of Alert Aircraft Commander certification.

Table 3.2. Mission Qualification Training Requirements--ACS-S, CCO, ACS-R, ACS-D/A, ACS-D/B.

CODE	DESCRIPTION	ACS-S	CCO	ACS-R	ACS-D/A	ACS-D/B
AA21	AFI 11-202V2 Qualification Evaluation			1	1	1
AG05	Regulation and Directive Orientation			P	P	P
CE01	Console, Equipment/Controls			P	P	P
CE02	Internal Communications System			P	P	P

CODE	DESCRIPTION	ACS-S	CCO	ACS-R	ACS-D/A	ACS-D/B
CE04	UHF Command Radio System			P		
CE06	UHF Sat Voice Radio System			P		
CE07	HF Communication System			P		
CE08	MF Radio			P		
CE10	UHF Networks			P		
CE11	Special User Systems			P		
CE12	Secure Voice Systems			P		
CE13	Message Processing System				P	
CE14	DSCS ECCM Networks				P	
CE15	MWTTY				P	
CE16	SCT Network				P	
CE17	HF Networks			P		
CE18	PSM Procedures			P		
CE19	UHF SATCOM (AFSAT)					P
CE20	Secure Data Circuits				P	
CE21	MPS Procedures				P	
CE23	UHF DAMA System					P
CE24	EHF System					P
CE25	EHF Net Procedures					P
CE27	Force Report Back Procedures			P	P	P
CE28	Encryption/Decryption/Authentication			P	P	P
CE29	Operational Procedures			P	P	P
CE30	EAM Procedures	P		P	P	P
CE33	Lowspeed				P	
CE34	AUTODIN				P	
CE35	MILSTAR					P
CE36	VLF/LF				P	
GS26	Checklist Procedures/Use			P	P	P
GS30	Alert Procedures	P	P	P	P	P
GS38	Emergency Procedure Exam	P	P	P	P	P
GS70	Emergency Procedures			P	P	P
ME19	Mission Planning/Briefing			P	P	P
ME20	Crew Coordination			P	P	P
ST00	Sortie	1		1	1	1

Table 3.3. Mission Qualification Training Requirements--TC-1, TC-2, RM-1, RM-2, DTWAO, and SHF.

CODE	TRAINING EVENT	TC-1	TC-2	RM-1	RM-2	DTWO	SHF
AA21	AFI 11-202V2 Qualification Evaluation	1	1	1	1	1	1
CE02	Internal Communications Systems			P	P		
CE03	Electronic Switching System				P		
CE04	UHF Command Radio System			P			
CE06	UHF Satellite Voice Radio System				P		
CE07	HF Communication System				P		
CE08	MF Radio				P		
CE09	VLF/LF Communication System			P	P		
CE11	Special User Systems				P		
CE12	Secure Voice Systems				P		
CE13	Message Processor System				P		
CE34	AUTODIN				P	P	
CE37	VLF PA-C/DTWA Operations (TC-1)	P					
CE40	VLF PA-C Operations			P			
CE41	Crypto/Teletype				P		P
CE45	Airborne Performance Monitor		P		P		
CE59	TWA Cycle					P	
CE62	Communications Check Flight Procedures		P				
CE91	Cooling Air	P					P
CE92	Cooling Liquid	P					P
CE93	Electrical Systems-AC	P					P
CE94	Electrical Systems-DC	P					P
CE95	Electrical load summary charts	P					
CE96	TC-2 Console		P				
CE97	MIB Knowledge	P	P	P	P	P	P
CE98	Ground Entry Point Knowledge		P				
CE100	Patch and Test Facility		P		P		P
CE101	Circuit Configuration/Operations		P				P
CE102	CAPS						P
CE103	Receiver Transmitter Group						P
CE104	AN/USC-28						P
CE105	Single Channel Transponder						P

CODE	TRAINING EVENT	TC-1	TC-2	RM-1	RM-2	DTWO	SHF
CE106	SHF Console						P
CE108	FDMA						P
CE109	MC3/Vocoder						P
CE110	Multiplex Systems		P		P		
CE111	UHF/FDM		P		P		
CE112	Miscellaneous Electronics		P		P		
CE115	Automatic Switchboard				P		
CE116	Tape Recorder System				P		
CE118	CPI/Voice Recorder			P			
CE119	VHF Command Radio System			P			
CE120	Weather Radar/Rendezvous Beacon			P			
CE121	LRRA			P			
CE122	TACAN			P			
CE123	IFF			P			
CE124	INS/Global Positioning System (GPS)			P			
CE125	VOR/ILS/Marker Beacon			P			
CE127	DTWA Controls and Indicators					P	
CE128	DTWA Modes of Operation					P	
CE129	Antenna Pointing Group						P
CE130	ADP System				P	P	
CE131	Digital Wall Clock System				P		
CE132	Ground Line Facilities				P		
CE133	MILSTAR				P		
GS26	Checklist Procedures/Use	P	P	P	P	P	P
GS37	Proficiency Exam	1	1	1	1	1	1
GS38	Emergency Procedure Exam	1	1	1	1	1	1
ME19	Mission Planning/Briefing	P	P	P	P	P	P
ME20	Crew Coordination	P	P	P	P	P	P
ST00	Sortie	P	P	P	P	P	P

Chapter 4

CONTINUATION TRAINING

4.1. Scope. This chapter prescribes training standards to maintain qualification, and currency of crew members in the E-4.

4.2. Training Period. The annual period starts on 1 July.

4.3. Prerequisites. Crew members must have completed E-4 IQT/MQT.

4.4. Academics/Ground Training. Academics/Ground training is intended to be accomplished at regular intervals, which are contained in **Table 4.2.** The following symbols will be used to establish the regular frequency of training.

4.4.1. BA Biannual. Must be accomplished no later than the end of the 24th month from the month last accomplished.

4.4.2. A Annual. Must be accomplished no later than the end of the 12th month from the month last accomplished.

4.4.3. SA Semiannual. Must be accomplished no later than the end of the 6th month from the month last accomplished.

4.4.4. Q Quarterly. Must be accomplished no later than the end of the third month from the month last accomplished.

4.4.5. M Monthly. Must be accomplished each month.

4.4.6. AR As Required by governing instructions.

4.5. Flying Training. Academic training will be completed prior to starting the E-4 flight phase. Flying training requirements will be accomplished as outlined in **Table 4.3.**

4.6. Proration of Training:

4.6.1. Training requirements for crew members who are not available for duties as outlined in AFI 11-202V1 will be prorated. Commanders will not prorate to meet RAP lookback requirements.

4.6.2. Enter the number of months a crew member is unavailable into the AFORMS to prorate remaining training. AFORMS prorates the annual event table using the following formula:

4.6.2.1. Events remaining = Annual Events X (# months available/12), truncated to the nearest whole number.

4.6.3. Crew members completing MQT and receiving CMR certification during a given month start continuation training on the first day of the following month. Training accomplished during IQT/MQT is not counted toward CT requirements remaining after attaining CMR status. Initial currency dates for recurring training events are established by the date of the AFI 11-202V2 evaluation. For events not accomplished on the initial evaluation (such as night landings) the initial currency date is established by the date the event was last accomplished and graded proficient. All requirements for

crew members departing PCS or separating will be prorated from the last day of the month preceding the month of departure. Refer to AFI 11-202V1 for further guidance.

4.6.4. Flying and academic training requirements for crew members who are not available for normal duties will be prorated according to **Table 4.1.**

Table 4.1. Proration Table.

Continuous Days Unavailable	Months Proration
0-30	0
31-45	1
46-75	2
76-105	3
106-135	4
136-165	5
166-195	6
196-225	7
226-255	8
256-285	9
286-315	10
316-345	11
346-366	12
Non-Continuous Days Unavailable	
>45	2

4.7. Failure to Complete Training Requirements. Individuals who fail to complete their CMR ground and flight requirements will be designated N-CMR and will have their recent training history reviewed by the squadron commander. The squadron commander will determine what training is necessary for the crew member to regain CMR status. This make-up training is creditable towards the new training period. If this review indicates a proportionate/realistic volume of the BMC/CMR events were recently accomplished that would ensure combat proficiency, the squadron commander may declare the individual BMC/CMR.

4.8. Loss of Currency. Individuals delinquent in one or more continuation training events will be placed on supervised status for those events and declared N-CMR (N/A for ME21 and LD11). Currency will be regained IAW AFI 11-202V1. If a flight check is not required, annotate on the AFTO Form 781, **AFORMS Aircrew/Mission Flight Document,** and MAR that currency is regained.

4.9. Recurrency. Crew members failing to complete annual training tables become N-BMC/N-CMR. Reinstatement to BMC/CMR status requires a minimum of one instructor supervised flight to demonstrate proficiency in delinquent events.

4.10. Commercial Contract Aircraft Continuation Training. When commercial contract B-747 training (wet lease) is available, pilots and flight engineers will maximize logging flying events in that aircraft under the provisions of the commercial vendor. Events that are not necessarily E-4 specific should be accomplished and counted for currency and volume. Mission accomplishment reports will be completed just like an E-4 sortie.

Table 4.2. Continuation Academic/Ground Training Requirements.

CODE	COURSE	FREQ	POSITION
AG20	ACS-S	Q	ACS-S
AG21	ACS-R	Q	ACS-R
AG22	ACS-D, RM-1,2, TC-1,2, DTWO	Q	ACS-D
AG23	ACS Instructor	Q	IACS-R, IACS-D
GA23	CRM (Cockpit Resource Mgt)	A	P/N/FE
GA48	CPR	A	IPSS
GS05	Food Handlers	A	IPSS
GS09	Simulator 1/2/3	SA	P/FE
GS35	Instrument Refresher Course	AR	P/N
GS42	SIOP Study	SA	P/N/FE
GS44	SIOP Mission Certification	AR	P/N/FE
GS51	Cockpit Procedural Trainer	A	P/FE
GS52	Emer/Normal Pro and Sys Review	SA	ACS, CCO, SHF, DTWO, RM/TC
GS53	Cat II/IIIA Refresher	SA	P
LS06	LSE Training	A	ALL
LS08	Egress Training, Non-ejection	A	ALL

Notes.

1. LS06, LS08, GA48 are NO GO items for all flights as primary crew member.

2. GS42, GS44 are NO GO items for alert.

Table 4.3. Continuation Flight Training Annual BMC/CMR Requirements.

PILOT							
I-Inexperienced E-Experienced		BMC		CMR		Max in Sim	(Notes) Currency
CODE	TRAINING EVENT	I	E	I	E		
AP01 *	Precision Approach	36	26	80	60	9	(6)
AP04 *	NonPrecision Approach	12	10	28	22	6	(6)
AP09 *	Penetration (Enroute)	12	8	40	26	6	(6)
AP20 *	ILS (Manual)	24	18	42	36	9	(2,6)
AP22 *	Cat II ILS	12	10	28	20	3	(2,6)

AP26 *	Missed Approach (Manual)	6	4	16	10	3	(6)
AP27 *	Missed Approach (Autopilot)	6	4	12	8	3	(6)
AP30	Circling Approach	6	4	12	9		(2)
AP31 *	NDB Approach	6	4	12	8	3	(6)
AP40	PAR	6	4	14	8		(2)
AP42 *	Instrument Approach	48	36	108	82	15	(6) 1/45
AP70	Proficiency Exercise	4	2	6	4		(5)
AP80	IP Supervised/IP Proficiency	NA	2	3	2		(5)
AP90	Cat II/IIIA Certification						1/180
AR14	Receiver A/R Tanker AP Off	4	2	10	4		
AR15	Receiver Rendezvous	4	2	14	8		
AR25	Receiver Air Refueling	12	10	28	20		(3) 1/45
AR44	Receiver Air Refueling Night	6	4	10	4		(3) 1/90
DP05 *	Instrument Departure	12	8	40	26	3	(6)
LD00 *	Total Landings	48	36	76	60	9	(1,6) 1/45
LD01 *	Landing, Day					6	(1,6)
LD02 *	Landing, Night	6	4	20	16	3	(1,6) 1/90
LD10	Landing, Short Field			4	2		(1,7) 1/180
LD11 *	Touch and Go Landings (IP Only)					2	(6) 1/45
LD13	Landing, Full Stop	10	8	26	18		(1) 1/60
LD41	Cat II or IIIA Autoland	6	4	12	8		(2)
ME21	Instructor/Evaluator Duties						(4) 1/60
ME30	Alert/Training Taxi Exercise			8	4		(1)
ME90	Rendezvous Proc. Exercise			4	4		
ME91	Block Time Control Exercise			6	4		(7) 1/60
ME93	Helicopter Rendezvous Proc.			13	8		1/90
NE21	TWA Activity			4	2		
SR41	Pilot RAP Sortie	6	4	10	10		
ST00	Sortie	36	24	52	36		
TO00 *	Takeoff	12	8	26	18	3	(6) 1/45

Notes:

1. Credit LD00 when accomplishing LD01, LD02, LD10, LD11, or LD13. Accomplishing LD02 will update LD00 currency.

2. Credit AP01 when accomplishing AP20, AP22, or AP40.

3. Credit AR25 when accomplishing AR44.

4. Loss of currency in ME21 or LD11 does not result in N-BMC or N-CMR status.

5. Credit AP70 when accomplishing AP80.

6. Pilots will log "*" items only once per sim period (AP42 may be logged twice per sim period), not to exceed the max allowed in sim during training cycle.

7. LD10 and ME91 for Alert Aircraft Commanders only.

NAVIGATOR						
I-Inexperienced E-Experienced		**BMC**		**CMR**		**(Notes) Currency**
CODE	**TRAINING EVENT**	**I**	**E**	**I**	**E**	
AP56	Approach (Monitored)	16	12	60	36	
AR15	Receiver Rendezvous	10	8	20	14	(1,2) 1\45
AR27	Point Parallel Rendezvous	8	6	16	12	(1,2)
AR32	Enroute Rendezvous	2	2	4	2	(1,2)
ME21	Instructor/Evaluator Duties					(3) 1\60
ME30	Alert/Training Taxi Exercise			8	4	
ME90	Rendezvous Proc. Exercise			4	4	
ME91	Block Time Control Exercise			6	4	(2) 1\60
ME93	Helicopter Rendezvous Proc.			13	8	(2) 1\90
NE01	System Navigation Leg	4	4	4	4	
NE03	Celestial Fix	2	2	2	2	
NE04	Celestial Position	4	4	4	4	
NE14	INS/INU Continuous/Manual Update	16	12	36	24	
NE15	INS/INU Bearing/Distance Update	16	12	30	18	
NE21	TWA Activity			4	2	
NE22	Cont. Three INS Mixing/INU differential updating	16	12	30	18	
NE90	Celestial Heading Check	4	4	4	4	
SR61	Navigator RAP Sortie	8	8	10	10	(2)
ST00	Sortie	36	24	52	36	
TO26	Departure (Monitored)	16	12	60	36	

Notes:

1. Dual credit AR 15 with AR27 or AR32.

2. Credit may be awarded while instructing items that meet definition of SR61.

3. Loss of currency in ME21 does not result in N-BMC or N-CMR status.

FLIGHT ENGINEER							
I-Inexperienced E-Experienced		**BMC**		**CMR**		**Max in Sim**	**(Notes) Currency**
CODE	**TRAINING EVENT**	**I**	**E**	**I**	**E**		
AP70	Proficiency Exercise	4	3	12	4		
AR25	Receiver Air Refueling	5	4	24	10		(1)
LD00 *	Landing	20	16	52	36	5	(1,3,4) 1/45
LD11 *	Touch and Go Landing					2	(1,2,3,4) 1/45
LD13 *	Landing, Full Stop	16	12	38	24	3	(1,3,4) 1/45
ME21	Instructor/Evaluator Duties				4		(2) 1/90
ME30	Alert/Training Taxi Exercise			8	4		
ME90	Rendezvous Procedures Exercise			4	4		(1)
NE21	TWA Activity			5	2		
SR71	Engineer RAP Sortie			24	12		
ST00	Sortie	36	24	52	36		
TO00 *	Takeoff	16	12	48	24	3	(1,3,4) 1/45

Notes:

1. Credit may be awarded when instructing TO00, LD00, LD11, LD13, AR25 and ME90 only when the student is non-current, or unqualified.

2. Loss of currency in ME21 and LD11 does not result in N-BMC or N-CMR status.

3. TO00, LD00, LD11 and LD13 may be logged only once per simulator training period, not to exceed max in sim for training cycle.

4. "*" Items indicate only those that may be logged in the sim.

INFLIGHT PASSENGER SERVICE SPECIALIST						
I-Inexperienced E-Experienced		**BMC**		**CMR**		**(Notes) Currency**
CODE	**TRAINING EVENT**	**I**	**E**	**I**	**E**	
AR25	Receiver Air Refueling	3	2	6	6	(2)
ME21	Instructor/Evaluator Duties					(3) 1/60
ME30	Alert/Training Taxi Exercise			8	4	
ME90	Rendezvous Procedures Exercise			4	4	
ME93	Helicopter Rendezvous Proc.			4	4	(2) 1/90

SR81	IPSS RAP Sortie			10	10	
ST00	Sortie	36	24	52	36	

Notes:

1. Credit AR25 when pilots accomplish AR44.

2. Credit may be awarded when instructing AR25 and ME93 only when the student is non-current, unqualified, or is entered in requal training.

3. Loss of currency in ME21 does not result in N-BMC or N-CMR status.

MISSION SYSTEMS CREW MEMBER						
I-Inexperienced E-Experienced		BMC		CMR		(Notes) Currency
CODE	TRAINING EVENT	I	E	I	E	
CE37	VLF PAC/DTWA Operations (TC1)	5	3	8	4	
CE38	Radio Maintenance One (RM1)	5	3	8	4	
CE39	Radio Maintenance Two (RM2)	5	3	8	4	
CE40	VLF PAC Operations (RM1)	5	3	8	4	
CE43	Technical Control One (TC1)	5	3	8	4	
CE44	Technical Control Two (TC2)	5	3	8	4	
CE51	SHF Operator/Maintenance (SHF)		3	8	4	
CE53	SHF SCT Injections	8	4	10	6	
CE62	Comm Check Flight Procedures (TC2)	5	3	8	4	
CE87	DTWA Operations (DTWO)	5	3	8	4	1\120
ME21	Instructor/Evaluator Duties					(1) 1\60
ST00	Sortie	7	6	10	8	

Note 1. Loss of currency in ME21 does not result in N-BMC or N-CMR status.

ACS-S						
I-Inexperienced E-Experienced		BMC		CMR		(Notes) Currency
CODE	TRAINING EVENT	I	E	I	E	
CE42	SASS	6	4	10	8	
ST00	Sortie	8	6	12	10	1\60

ACS-R						
CODE	TRAINING EVENT	I	E	I	E	(Notes) Currency
CE42	SASS	6	4	10	8	
CE46	Radio	6	4	10	8	
ME21	Instructor/Evaluator Duties					(1) 1\60

ST00	Sortie	8	6	12	10	1\60
Note 1. Loss of currency in ME21 does not result in N-BMC or N-CMR status.						

ACS-D						
CODE	**TRAINING EVENT**	**I**	**E**	**I**	**E**	**(Notes) Currency**
CE42	SASS	6	4	10	8	
CE47	Milstar	6	4	10	8	
CE48	Autodin	6	4	10	8	
CE49	Lowspeed					
CE50	VLF/LF	6	4	10	8	
CE52	Message Processing System	6	4	10	8	
ME21	Instructor/Evaluator Duties					(1) 1\60
ST00	Sortie	8	6	12	10	1\60
Note 1. Loss of currency in ME21 does not result in N-BMC or N-CMR status.						

COMMUNICATION CONTROL OFFICER						
CODE	**TRAINING EVENT**	**I**	**E**	**I**	**E**	**(Notes) Currency**
ME21	Instructor/Evaluator Duties					(1) 1\90
ST00	Sortie	6	4	10	8	1\60
Note 1. Loss of currency in ME21 does not result in N-BMC or N-CMR status.						

Chapter 5

SPECIALIZED TRAINING

5.1. Scope. This chapter contains prerequisites and training requirements necessary to prepare crew members to perform specialized duties in the E-4 aircraft. This includes instructor upgrade for all positions, alert A/C qualification, and any other specialized training above the BMC/CMR qualification.

5.2. Instructor Upgrades. This section prescribes the requirements to be an instructor on the E-4 in all applicable specialties.

5.2.1. Prerequisites. Flying time requirements are depicted in **Table 5.1.** Instructor candidates in E-4 aircraft must satisfy these prior to being designated as instructors and performing instructor duties. Training and evaluation requirements may be accomplished prior to attaining these minimums, however the individual may not be designated as an instructor nor perform instructor duties until these requirements are met.

Table 5.1. Minimum Flying Time Requirements for Instructor Upgrade.

POSITION	TOTAL E4 TIME
Pilot	500 or 300 (NOTE 1)
Navigator	500 or 300 (NOTE 1)
Flight Engineer	500 or 300 (NOTE 1)
In-flight Passenger Service Specialist	400 or 100 (NOTE 1)
ACS-R/ACS-D/CCO	100 (NOTE 2)
SE	50 (NOTE 3)
Notes: 1. One year instructor experience in another TTB aircraft and one year as an E-4 aircraft commander/ navigator/flight engineer/in-flight passenger service specialist. 2. Should have 100 hours in their primary position or one year as a mission ready crew member. 3. Should have 50 hours or six months as a Systems Engineer.	

5.2.1.1. MAJCOM Instructor Course. To develop a more professionally trained instructor force, it is mandatory that pilots, navigators, and flight engineers complete, or have completed, a MAJCOM level instructor course prior to performing instructor duties. A MAJCOM level academic course is optional though highly desirable for instructor in-flight passenger service specialists and ACS/RM/TC/DWTO/SHF/CCO personnel.

5.2.2. Responsibilities for Instructor Upgrades:

5.2.2.1. The squadron commander will select instructor candidates, monitor upgrade training, and document the completion of training. The commander will designate all instructors in writing including additional staff personnel if unit training requirements dictate the utilization of such personnel. Flight instructors will be designated as flight examiners by the commander to fulfill the requirements of AFI 11-202V2.

5.2.2.2. Instructors will instruct, demonstrate and supervise ground/flight activity involving aircraft normal, emergency, and instrument procedures/techniques. Instructors will also administer all requalification training for loss of currency and recurring academic training.

5.2.3. Instructor Training Requirements:

5.2.3.1. Upgrade Requirements. Candidates will complete a course for their specialty developed by the 1 ACCS/CCT and successfully complete an AFI 11-202V2 evaluation. Candidates are allowed 60 days after entry into the program to complete training. Additional training beyond these prescribed minimums will be at the discretion of the squadron commander.

5.2.3.2. Proficiency. Instructor candidates will demonstrate proficiency in all activities in which they could be required to instruct (**Table 5.2.** and **Table 5.3.**). Previous instructors who have been non-current as instructors in excess of one year must reaccomplish these training requirements. Those who have been non-current less than one year will receive training as directed by the 1 ACCS/CC.

5.2.3.3. Academics. Instructor candidates who have previously completed and documented item AG10, Instructor Academic Training, for this or any other MAJCOM approved program need only accomplish that portion pertaining to regulations and manuals AG05. AG10 will be accomplished prior to flight training.

5.2.3.4. Student Briefing and Critique. Each candidate will receive training in student briefing and critique. The instructor giving this training will use the guidelines outlined under instructor check in AFI 11-2E-4V2, *Aircrew Evaluation Criteria*.

5.2.3.5. Flight Training. Training for all crew positions will be IAW the requirements outlined in the applicable instructor course syllabi. Schedule a minimum of two missions. For pilots one mission must include night transition, touch-and-go landings and night receiver air refueling. All pilot flight training requirements must be accomplished from the right seat. Instructor candidates will demonstrate and instruct in all phases of flight. Emphasis will be placed on proper procedures, flying and instructional techniques, and safety.

5.2.3.6. Policies. Upgrade training will be administered by instructor qualified crew members of like specialty and will be IAW with HQ ACC/DO-approved syllabi.

5.2.4. Evaluations:

5.2.4.1. Individuals will be recommended for an evaluation by an instructor of like specialty. The individual's upgrade monitor will review the individuals training records after the recommendation and prior to the evaluation to ensure all appropriate training has been successfully completed and documented. The instructor recommending a student for evaluation should not act as the evaluator for the student's evaluation.

5.2.4.2. Flight Examiner Upgrades. For flight examiner upgrade requirements, see AFI 11-202V2.

Table 5.2. Instructor Upgrade Training Requirements P/N/FE/IPSS.

CODE	TRAINING ITEM	PILOT	NAV	FE	IPSS
AA21	AFI 11-202V2 Qualification Evaluation	1	1	1	1
AG01	E-4B System Course				1
AG10	Instructor Academic Training	1	1	1	1
AP04	Non-Precision Approach	P			
AP09	Penetration (Enroute)	P			
AP20	ILS (Manual)	P			
AP22	Cat II ILS	P			
AP26	Missed Approach (Manual)	P			
AP27	Missed Approach (Auto)	P			
AP30	Circling Approach	P			
AP31	NDB Approach	P			
AP39	Instrument Approach/Missed Approach Simulated 3 Eng	P		P	
AP40	PAR	P			
AP51	Holding Pattern	P			
AP56	Approach (Monitored)		P		
AP68	Visual Pattern	P			
AP90	CAT II/IIIa Certification	1			
AR14	Receiver A/R Tanker AP Off	P			
AR15	Receiver Rendezvous	P	P		
AR24	Radio Silent, Visual Signals	P			
AR25	Receiver Air Refueling	P		P	P
AR27	Point Parallel Rendezvous		P		
AR30	Receiver Rendezvous Overrun Procedures	P	P		
AR32	En route Rendezvous		P		
AR44	Receiver Air Refueling, Night	P			
AR46	Receiver Air Refueling Breakaway Procedures	P	P	P	
DP05	Instrument Departure	P			
GS10	Alert Start	P		P	
GS12	Instructional Techniques	P	P	P	P
GS14	Briefing/Control of Passenger				P
GS16	Pretakeoff Procedures				P
GS18	Post flight Procedures	P	P	P	P

CODE	TRAINING ITEM	PILOT	NAV	FE	IPSS
GS20	Aircraft Systems and Equipment Operations	P	P	P	P
GS26	Checklist Procedures/Use	P	P	P	P
GS30	Alert Procedures	P		P	P
GS70	Emergency Procedures	P	P	P	P
GS71	Forms	P	P	P	P
GS72	Menu Planning				P
LD01	Landing, Day	P		P	
LD02	Landing, Night	P			
LD10	Landing, Short Field	P			
LD11	Touch and Go Landing	P		P	
LD14	Landing, Reverse Thrust	P		P	
LD33	Approach/Landing Full Stop, Simulated 3 Engines	P		P	
LD41	Category II or IIIa Autoland	P		P	
LS08	Egress Training, Non-ejection				1
ME19	Mission Planning /Briefing	P	P	P	P
ME20	Crew Coordination	P	P	P	P
ME30	Alert/Training Taxi	P	P	P	P
ME90	Rendezvous Procedures Exercise	P	P	P	P
ME91	Block Time Control Exercise	P	P		
NE01	Systems Navigation Leg		P		
NE11	General Navigation	P	P		
NE14	INS Continuous Update		P		
NE15	INS Bearing/Distance Update		P		
NE22	Continuous Three INS Mixing		P		
NE36	INS/FMS Operation		P		
ST00	Sortie	P	P	P	P
TO00	Takeoff	P		P	P
TO22	Climb Procedures	P	P	P	P
TO25	T/O Engine Failure After V1	P		P	
TO26	Departure (Monitored)		P		
Note. Instructor candidates who have previously completed and documented item AG10, Instructor Academic Training, for this or any other MAJCOM approved program need only accomplish that portion pertaining to regulations and manuals AG05.					

Table 5.3. Instructor Upgrade Training Requirements ACS-R/ACS-D/CCO/SE.

CODE	TRAINING ITEM	ACS-R	ACS-D	CCO	SE
AA21	Instructor Qualification Evaluation	P	P	P	P
AG05	Reg/Dir Orientation	P	P	P	P
GS12	Instructor Technique	P	P	P	P
GS90	Brief/Critique	P	P	P	P
GS91	Demonstration/Performance Method	P	P	P	P
GS92	Lecture Method	P	P	P	P
GS93	Discussion Method	P	P	P	P
Note. It is highly desirable for instructor upgrade candidates to attend the ACC Flight Instructor Development Course prior to beginning any squadron level instructor upgrade program.					

5.3. Alert Aircraft Commander Qualification Training. All 1 ACCS pilots are initially qualified to serve as first pilots for National Airborne Operations Center (NAOC) alert missions. For all other 1 ACCS missions, pilots are initially certified to serve as aircraft commanders and as first pilots.

5.3.1. Prerequisites. Pilots should serve one year as an Aircraft Commander (use IQT AFI 11-202V2 evaluation date to begin timing) before serving as an Alert Aircraft Commander. Training events leading to Alert Aircraft Commander certification may be accomplished prior to this anniversary.

5.3.2. Upgrade to Alert Aircraft Commander is not automatic. It is presumed that in one year a pilot will accumulate approximately 300 flying hours, accomplish 7 to 8 alert tours, and gain exposure to all the routine alert airfields in the continental United States. This level of experience is crucial for consideration for Alert Aircraft Commander qualification.

5.3.3. Procedures. Aircraft commanders will be administratively certified by the squadron commander to serve as an Alert Aircraft Commander and the documentation for this certification will be maintained in the individual's training folder.

5.3.3.1. The following events must be completed and documented under the supervision of an instructor to complete administrative certification as an Alert Aircraft Commander: GS09 Alert Simulator Profile, AG18 Alert Aircraft Commander Responsibilities, LD10 Short Field Landing, ME91 Block Time Control Exercise. An alert tour under the supervision of an instructor must also be accomplished.

5.4. Functional Check Flight (FCF) Crew Training. The 1 ACCS squadron commander will designate certain crew members, upon recommendation by current FCF crew members, as FCF qualified crew members. Consideration for FCF designation should only be given to the most experienced and most proficient crew members in the squadron. Evaluator's and training flight instructors can serve as FCF crew members and should be given top consideration.

5.4.1. Qualification Criteria/Procedures:

5.4.1.1. Aircraft commanders. Will be instructor or evaluator qualified and must satisfactorily perform at least one FCF under the supervision of another FCF qualified aircraft commander.

5.4.1.2. First pilots. Will be highly experienced and proficient (preferably instructors but not mandatory). Must perform at least one FCF under the supervision of another FCF qualified aircraft commander. Non-instructor FCF first pilots will not perform FCFs without a qualified FCF aircraft commander in the opposite seat.

5.4.1.3. Navigators. Will be instructor or evaluator qualified and must satisfactorily perform at least one FCF under the supervision of another FCF qualified navigator.

5.4.1.4. Flight Engineers. Will be instructor or evaluator qualified and must satisfactorily perform at least one FCF under the supervision of another FCF qualified flight engineer.

Chapter 6

NAVIGATOR TRAINING PROCEDURES

6.1. Scope. Navigation training procedures and standards for E-4B navigators.

6.2. Celestial Navigation Procedures:

6.2.1. Establish the navigation leg routing during mission planning. Base minimum navigation leg duration on the scheduled and available flight plan time. The intent is to fly the duration specified for the type of navigation leg being accomplished. Due to weather deviations, controller restrictions, adverse tailwind components, etc., the navigation leg may be terminated early to meet mission timing. In this case, credit will be awarded if minimum events are accomplished.

6.2.2. Establish control time and positions if required for type of navigation leg being flown. Alternate control time and positions may be used when in-flight replanning, controller restrictions, weather deviations or operational requirements prohibit reaching planned control time and positions.

6.2.3. All navigation training legs should adhere to planned course and airspeed except as noted above. Navigation leg requirements should not be accomplished during climbs, after takeoff, rendezvous, descent before landing, holding patterns, air refueling orbits, transition or landing. Navigation leg requirements, including checklist items, should be completed not later than 10 minutes prior to a rendezvous point, anchor point, Initial Approach Fix (IAF), beginning of a Standard Terminal Arrival (STAR), or planned starting point for an enroute descent.

6.2.4. Start and end navigation may be determined by any fixing/dead reckoning available. Base classification of the navigation leg encompassing both day and night celestial activity on the type of the majority of fixes/most probable points obtained. When no majority exists, classification will be based on the last fix/Most Probable Position (MPP) obtained.

6.2.5. Announce final Estimated Time of Arrival (ETA) prior to reaching termination point. ETAs may be revised any time to accommodate changes in ground speed. The navigation leg is considered complete after the termination fix has been taken and plotted.

6.2.6. Alteration or reworking of celestial or other data is not permitted after navigation leg is terminated. After it has been terminated, log or chart only alterations and entries for clarification, or log completion will be permitted. Alterations and entries may be made in flight or after landing, but will not be accomplished during the period of penetration to final landing.

6.3. Air Traffic Rules:

6.3.1. During all general navigation activity, attempt to maintain centerline at all times. Deviations from Air Route Traffic Control Center (ARTCC) approved routing will not exceed 10 Nautical Miles (NM) s (4 NMs along airways) unless approved by ARTCC. See Flight Information Publications (FLIP), FAA Handbook 7110.65 and AFI 11-202V3, *General Flight Rules*, for additional requirements and restrictions.

6.4. Systems Navigation Leg:

6.4.1. This provides guidance and rules for systems navigation leg training.

6.4.2. Minimum duration: 30 minutes

6.4.3. Minimum Accomplishments:

6.4.3.1. Three celestial Line of Position (LOP)s will be obtained, and the resulting fix or averaged LOP evaluated against the Inertial Navigation System (INS).

6.4.3.2. Two radar fixes if available.

6.4.3.3. One INS aided inertial continuous update or INU manual update.

6.4.3.4. One INS/INU Bearing/Distance update.

6.4.3.5. One manual update (may be accomplished in conjunction when rating the celestial or radar positions).

6.4.3.6. One celestial heading check.

6.4.3.7. Demonstrate continuous three-INS-mixing or INU differential updating.

6.4.4. Procedures.

6.4.4.1. Steering will be through INS/FMS autopilot coupled.

6.4.4.2. The positions determined by radar, TACAN, VOR, FMS, or celestial fixing need not be used to direct the aircraft. They will be used to check the INS/FMS position in any mode of operation.

6.4.5. Authorized Aids.

6.4.5.1. Celestial information.

6.4.5.2. Radar.

6.4.5.3. TACAN, VOR, GPS/FMS

6.4.5.4. All modes of the INS/INU.

6.4.6. Accuracy Standards.

6.4.6.1. Maintain 100 percent of scored positions within 10 NMs of planned course.

6.4.6.2. Maximum allowable terminal fix: 10 NMs

Chapter 7

SIMULATOR TRAINING PROGRAM

7.1. Scope. This chapter applies to pilots and flight engineers. Use these guidelines to conduct an effective simulator training program. Adherence to these guidelines ensures subject material is employed in a realistic manner on a regular basis.

7.2. Concept of Training:

7.2.1. Effective use of the flight simulator along with other training devices greatly enhances flight training programs. Crew members attending simulator training must prepare for each mission with the same emphasis given to aircraft missions. Review the flight profile and study the applicable abnormal/emergency procedures. Precede each simulator mission with a comprehensive briefing. The information presented should reinforce mission tasks. Cover Crew Resource Management (CRM) techniques as well as all data required to complete the profile.

7.2.2. Stress realism in all phases of trainer operation. Use the training device as if it were the aircraft to the maximum extent reasonable including proper operation of communication, personal, and emergency equipment. Emphasize and practice correct communications and instrument flight procedure. Include realistic navigational aid and flight instrumentation failures. Emphasize CRM during instrument penetration and approach to landing. Instructors must insure the simulator environment is as realistic as possible.

7.2.3. The basic content of each simulator mission is included in separate lesson outlines (paragraph **7.6.**). Accomplish malfunction and emergencies as outlined to insure maximum exposure to these areas/systems. Deviation from the lesson plan to meet specific training needs is encouraged since it enhances training. Satisfactorily complete simulator period 1 and simulator period 2 before advancing to simulator period 3.

7.2.4. Conduct the Cockpit Procedures Trainer (CPT) (GS51) prior to sim period 3. CPT training is designed as an open forum for the crew member to tailor training to their own needs. Include review of checklist procedures with each aircraft system.

7.2.5. Accomplish CT requirements as allowed in **Table 4.3.**

7.2.6. Review lesson plans biannually.

7.3. Objectives:

7.3.1. Insure all flight crews maintain the proficiency required to safely operate the aircraft and effectively perform the assigned mission.

7.3.2. Provide realistic simulator in-flight mission training for E-4 crew members to include: abnormal and emergency procedures, normal procedures, crew coordination, system operation, instrument training, and SIOP scenario.

7.4. References. T.O. 1E-4B-1, Volumes 1 and 2, *Flight Manual E-4B,* 1E-4B-1-1,Volume 3, *E-4B Performance Data Manual,* and AFM 11-217V1, *Instrument Flight Procedures*.

7.5. Instructional Materials. B-747-100/200/238/300 flight simulator with visual air refueling capability and a minimum of Phase C level FAA certification, B-747-100/200/238/300 cockpit procedural trainer, and aircraft system mock-ups.

7.6. Lesson Outlines:

7.6.1. Simulator Period 1:

7.6.1.1. Duration: 4 hours.

7.6.1.2. Pre-Mission Requirements. Review: Normal procedures, crew resource management (CRM), CAT II/IIIa procedures, instructor procedures and techniques, flight characteristics (stalls, steep turns) and engine failure takeoff continued emergency procedures.

7.6.1.3. Overview. Accomplish a training profile that includes normal operating procedures, instrument procedures including CATII/IIIa procedures, and emergency procedures relating to the takeoff phase.

7.6.1.4. Mission scenario:

7.6.1.4.1. Flight deck preflight.

7.6.1.4.2. Engine start and taxi procedures.

7.6.1.4.3. Normal Take-off.

7.6.1.4.4. Area departure.

7.6.1.4.5. Flight characteristics (steep turns, approaches to stalls).

7.6.1.4.5.1. Unusual attitude recognition and recovery.

7.6.1.4.6. Instrument procedures:

7.6.1.4.6.1. Holding.

7.6.1.4.6.2. ILS.

7.6.1.4.6.3. NDB.

7.6.1.4.7. Rejected landing.

7.6.1.4.8. Missed Approach.

7.6.1.4.9. Autoland.

7.6.1.4.10. Takeoff emergencies:

7.6.1.4.10.1. Rejected takeoff.

7.6.1.4.10.2. Engine failure after V1.

7.6.1.4.10.3. Three engine approaches.

7.6.2. Simulator Period 2:

7.6.2.1. Duration: 4 hours.

7.6.2.2. Pre-Mission Requirements. Review: Normal procedures, CRM, emergency and abnormal procedures, two-engine approach and landing procedures, and aircraft systems.

7.6.2.3. Overview. Accomplish a training profile that includes normal operating procedures, various aircraft system malfunctions, emergency procedures and two-engine approach and landing procedures.

7.6.2.4. Mission scenario:

    7.6.2.4.1. Flight deck preflight

    7.6.2.4.2. Engine start (abnormal), alternate start procedures

    7.6.2.4.3. Takeoff and departure at maximum gross weight

    7.6.2.4.4. Aircraft system malfunctions:

        7.6.2.4.4.1. Electrical fire/failure

        7.6.2.4.4.2. Hydraulic failures

        7.6.2.4.4.3. Landing gear abnormalities

        7.6.2.4.4.4. Flap malfunction

        7.6.2.4.4.5. Flight control malfunctions

        7.6.2.4.4.6. Brake failure/fire

        7.6.2.4.4.7. Pressurization failure (Rapid Decompression)

        7.6.2.4.4.8. Normal landing

        7.6.2.4.4.9. Takeoff emergencies:

            7.6.2.4.4.9.1. Rejected takeoff (MGW).

            7.6.2.4.4.9.2. MGW takeoff engine failure after V1.

            7.6.2.4.4.9.3. Fuel jettison.

            7.6.2.4.4.9.4. Engine failure/fire in-flight.

            7.6.2.4.4.9.5. Two-engine approach/landing.

            7.6.2.4.4.9.6. Aircraft evacuation.

7.6.3. Simulator Period 3:

    7.6.3.1. Duration: 4 hours.

    7.6.3.2. PreMission Requirements. Review: Alert Procedures, CRM, emergency and abnormal procedures, tactical doctrine, SIOP procedures, and air refueling procedures.

    7.6.3.3. Overview: The crew will accomplish a simulated SIOP mission operating in an Eastern United States locale.

    7.6.3.4. Mission Scenario:

        7.6.3.4.1. Alert Quick start

        7.6.3.4.2. Abnormal Engine start

        7.6.3.4.3. Three engine takeoff

        7.6.3.4.4. Three engine landing at weights above normal

7.6.3.4.5. Alert routing scenario

7.6.3.4.6. Air Refueling

7.6.4. Cockpit Procedure Trainer Periods (GS51):

7.6.4.1. Duration: 2 hours.

7.6.4.2. Overview: CPT training provides systems and procedural training for pilots and flight engineers.

7.6.4.3. System Topics:

7.6.4.3.1. Electrical System:

7.6.4.3.1.1. Electrical Smoke or Fire

7.6.4.3.1.2. High or Rising IDG Oil Temperature

7.6.4.3.1.3. IDG Oil Low Pressure Light On

7.6.4.3.1.4. 1, 2, or 3 Generators in One System Inoperative

7.6.4.3.1.5. Loss of All Generators

7.6.4.3.1.6. Generator Drive (IDG) Disconnect

7.6.4.3.1.7. Unbalanced or Oscillating KW/KVAR Indications

7.6.4.3.1.8. Generator Circuit Breaker (GCB) Open Light On and Field Off Light Off

7.6.4.3.1.9. Failed T/R Unit, DC Ammeter Reads Zero Generator

7.6.4.3.1.10. Circuit Breaker (GCB) Open Light and Field Off Light Off

7.6.4.3.1.11. Essential Bus Off Light On

7.6.4.3.1.12. Bus Tie Open Light On

7.6.4.3.1.13. Split System Breaker Closed

7.6.4.3.1.14. Locate 1 or 2 Open C/Bs Using 1

7.6.4.3.2. Air Conditioning/Pneumatics:

7.6.4.3.2.1. Air Conditioning Smoke

7.6.4.3.2.2. Duct Pressure Low

7.6.4.3.2.3. Wing Overheat

7.6.4.3.2.4. Pack(s) Trip

7.6.4.3.2.5. Bleed Air Overheat Light On

7.6.4.3.2.6. High Stage Bleed Air Valve Failure

7.6.4.3.2.7. Manual Pack Operation

7.6.4.3.2.8. Bypass, Inlet or Exit Doors Not in Preposition

7.6.4.3.2.9. Zone Overheat Light On

7.6.4.3.2.10. Trim Air Valve (Master) Closed

7.6.4.3.3. Pressurization:

   7.6.4.3.3.1. Rapid Depressurization

   7.6.4.3.3.2. Auto Fail Light On

   7.6.4.3.3.3. Pressurization System Manual Operation

   7.6.4.3.3.4. Pressurization System Partial Manual Operation

   7.6.4.3.3.5. Unscheduled Cabin Pressure Change

   7.6.4.3.3.6. Automatic Pressurization Electrical Power Interruption

7.6.4.3.4. Equipment Cooling:

   7.6.4.3.4.1. Loss of Flight Avionics Cooling

   7.6.4.3.4.2. Equipment Cooling Smoke Light On

7.6.4.3.5. Hydraulics:

   7.6.4.3.5.1. Hydraulic Systems Leak or Loss

   7.6.4.3.5.2. Eng. Driven Hyd. Pump Low Pressure Light On

   7.6.4.3.5.3. Hydraulic System Overheat Light On

   7.6.4.3.5.4. Air Driven Hydraulic Pump Low Pressure Light On (With ADP Switch in auto and Pneumatic Manifold Pressurized)

7.6.4.3.6. Engines:

   7.6.4.3.6.1. Engine Fire, Severe Damage or Separation

   7.6.4.3.6.2. Engine Failure and Shutdown

   7.6.4.3.6.3. In-flight Reverse Thrust Engine Restart In-flight

   7.6.4.3.6.4. Engines Stuck in Reverse During Gnd Ops

   7.6.4.3.6.5. Starter Valve Fails to Close

   7.6.4.3.6.6. Start Valve Open Light On In-flight

   7.6.4.3.6.7. Engine Overtemp on the Ground Other Than Start

   7.6.4.3.6.8. Tailpipe Fire

   7.6.4.3.6.9. Engine Overlimits

   7.6.4.3.6.10. Oil Filter Bypass Light On

   7.6.4.3.6.11. Engine Stalls

   7.6.4.3.6.12. High Engine Vibration

   7.6.4.3.6.13. Fuel Filter Bypass Light On

   7.6.4.3.6.14. Ground Idle Light On In-flight

   7.6.4.3.6.15. Multiple Engine Loss

7.6.4.3.7. Fire Protection Systems

7.6.4.3.7.1. Engine Nacelle Overheat

7.6.4.3.7.2. Fire Detection Light On

7.6.4.3.7.3. APU Fire Detector Fault Light On

7.6.4.3.7.4. Wheel Well Fire

7.6.4.3.8. Landing Gear:

7.6.4.3.8.1. Partial Main Gear Landing

7.6.4.3.8.2. Alternate Landing Gear Extension

7.6.4.3.8.3. Gear Not Centered Light On

7.6.4.3.8.4. Landing Gear Lever Will Not Move To Up Position

7.6.4.3.8.5. Gear Door Open Light On

7.6.4.3.8.6. Antiskid Hydraulic Light On

7.6.4.3.8.7. Anti-skid Grd Mode Light Does Not Come On During Ground Test

7.6.4.3.8.8. Ground Safety Relay Light On In-flight

7.6.4.3.8.9. Red Gear Light Remains On (Throttles(s) not at Idle Setting)

7.6.4.3.8.10. Antiskid Light On

7.6.4.3.8.11. Auto Brake Light On

7.6.4.3.9. Flight Controls:

7.6.4.3.9.1. Unscheduled Stabilizer Trim

7.6.4.3.9.2. Asymmetrical Trailing Edge Flaps

7.6.4.3.9.3. Split Trailing Edge Flaps

7.6.4.3.9.4. One or More Leading Edge Flaps Inoperative

7.6.4.3.9.5. Alternate Leading Edge Flap Operation

7.6.4.3.9.6. Alternate Trailing Edge Flap Operation

7.6.4.3.10. Automatic Flight:

7.6.4.3.10.1. Auto Stab Trim (A or B) Light On

7.6.4.3.10.2. Auto Throttle Light On

7.6.4.3.10.3. Yaw Damper Light On (Upper or Lower)

7.6.4.3.11. Navigation:

7.6.4.3.11.1. INS Warn Light On

7.6.4.3.11.2. INS Warn Light On (No Action or Malfunction Code Displayed)

7.6.4.3.11.3. Both (Pilot and Copilot) Central Instrument Warn Lights Flashing

7.6.4.3.11.4. One (Pilot or Copilot) Central Instrument Warn Light Flashing

7.6.4.3.11.5. Warning Flags (No CIWS Lights)

7.6.4.3.12. Engine Starting Malfunctions:

7.6.4.3.12.1. Hot Start

7.6.4.3.12.2. Hung Start

7.6.4.3.12.3. No EGT Rise

7.6.4.3.12.4. N2 Acceleration is Sluggish

7.6.4.3.12.5. EGT Climbing Through 750C

7.6.4.3.12.6. Dense Fuel Fogging Prior to Start Lever Movement

7.6.4.3.12.7. Instantaneous Light Off

7.6.4.3.12.8. Initial Fuel Flow Greater than 700 lbs/hr

7.6.4.3.12.9. Abnormal Oil Pressure After 30 Seconds After Start Switch On

7.6.4.3.12.10. No Indication of N1 Rotation

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DCS, Air and Space Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

Abbreviations and Acronyms

ACS—Airborne Communications Specialist

ACS-D—Airborne Communications Specialist-Data

ACS-R—Airborne Communications Specialist-Radio

ACS-S—Airborne Communications Specialist-Semi-Automatic Switching System

AFORMS—Air Force Operations Resource Management System

ARTCC—Air Route Traffic Control Center

BMC—Basic Mission Capable

BAQ—Basic Aircraft Qualification

CCO—Communication Control Officer

COMM—Communications

CMR—Combat Mission Ready

CT—Continuation Training (Phase III)

DOT—Deputy Operations for Training

DIS—Battle Management Operations and Training Division

DISA—Airborne Elements of Air Control Systems

DNIF—Duty Not Including Flying

DTWO—Dual Trailing Wire Operator

E—Experienced

FCF—Functional Check Flight

FE—Flight Engineer

HELO—Helicopter

I—Inexperienced

IAW—In Accordance With

INS—Inertial Navigation System

INU—Inertial Navigation Unit (for FMS/GPS mod aircraft)

IPSS—In-flight Passenger Service Specialist

IP/IN/IFE/IIPSS—Instructor Pilot/Navigator/Flight Engineer,/In-flight Passenger Service Specialist

IQT—Initial Qualification Training (Phase I)

MAJCOM—Major Command

MAR—Mission Accomplishment Report

MPS—Message Processing System

MQT—Mission Qualification Training (PhaseII)

N—Navigator

NAOC—National Airborne Operations Center

NMR—Non-mission Ready

OPS—Operations

P—Pilot

RAP—Ready Aircrew Program

RM—Radio Maintenance

SASS—Semi-Automatic Switching System

SHF—Super High Frequency

SE—System Engineer

TAR—Training Accomplishment Report

TC—Tech Controller

TX—Transition Training (Phase I)

UQ—Unqualified

Terms

Academic Training—"AG" events include classroom instruction related to aircraft systems and operation, flight characteristics and techniques, performance, normal and emergency procedures, and safety-of-flight items. Academic courses are designed to prepare students for flight training and are normally completed prior to commencing flight training.

Aircraft Commander—Pilot who is qualified to perform "Pilot in Command" duties during all 1 ACCS missions other than NAOC alert.

Aircrew—The complete complement of flight and mission crew personnel required to fly an operational mission.

Alert Aircraft Commander—An Aircraft Commander who is certified to serve as "Pilot in Command" for NAOC alert.

Continuation Training—Training required by qualified personnel to maintain their assigned level of proficiency.

Critical Phases of Flight—Defined as takeoff, air refueling, any type of approach and any other maneuver listed in this manual requiring instructor pilot supervision. Air refueling rendezvous is not considered a critical phase of flight.

Currency Events—Those events which must be accomplished at prescribed intervals to maintain the proficiency required to safely operate the aircraft or perform in-flight duties. Establishes the maximum

amount of time, which may elapse without performing the event properly/safely.

Flight Crew—The pilots, navigators, flight engineer, and in-flight passenger service specialist (P, N, FE, and IPSS).

Instructor—An individual who has been trained to instruct and is designated by the squadron commander to conduct all required training.

Mission Accomplishment Report—A computer generated product used for recording continuation training activity.

Mission Crew—Includes these crew positions: CCO, ACS-R, ACS-D, ACS-S, RM-1, RM-2, TC-1, TC-2, SHF, and DTWO.

Nonmission Ready—An individual who is not current or qualified in the aircraft, or has not completed the required continuation training, or is not certified to perform the unit mission.

Proficient—Individual can do and show others how to do the behavior in an activity at the minimum acceptable levels of speed, accuracy, and safety without assistance.

Reporting Status—A readiness indicator, which relates completion of, required training to the Status of Resources and Training reporting. See AFI 10-201, *Status of Resources and Training System.*

Supervised Status—A status assigned to an individual who is delinquent in a currency event, qualification level III IAW AFI 11-202V2 or has been so designated by the squadron commander. An individual in this status must be supervised by an instructor of like specialty while performing the non-current/unqualified event. The individual will be considered NMR (except for ME21 and LD11).

System Engineer—An individual who is qualified and maintains currency as a minimum in any combination of these positions: SE1, (TC-1, TC-2, RM-2), and SE2 = SHF and TC-1.

Upgrade Training—Training conducted to qualify a crew member as an instructor. Flight examiner upgrade will be IAW AFI 11-202V2. (Could also mean alert aircraft commander or special mission upgrade.)

Attachment 2

TRAINING EVENT DESCRIPTION TABLES

Table A2.1. "A" Events.

AG01	**E-4 Systems Course.** This course is designed to introduce the student to the various aircraft systems of the E-4. Credit will not be awarded until all course requirements are satisfied. The course will consist of the topics depicted below for each crew position.	
PILOTS/FLIGHT ENGINEERS		**IPSS**
Aircraft General		Aircraft General
Engines/APU/Fire Protection		Air Stair Operation
Fuel/Air Refueling		Emergency Escape Systems and Procedures
Electrical System		Alert Procedures
Hydraulics/Landing Gear/Brakes		Associated Directives
Flight Controls		Emergency Equipment/Procedures
Air Cond./Press/Equipment Cooling		Fire Department Training
Ice and Rain Protection		Mission Planning
Communications		Food handlers
Automatic Flight Control System		Communications
Navigation Systems		Galley Operations
Flight Instruments		CPR Training
Mission Equipment		Commercial Flight Academy
Weight and Balance/Performance		**ACS-S/ACS-R/ACS-D**
NAVIGATORS		Aircraft General
Air Refueling Rendezvous Procedures		Aircraft Interphone Systems
Aircraft General		Communications Equipment
Communications and Avionics Equipment		Emergency Equipment and Procedures
Emergency Escape Systems and Procedures		Emergency Escape Systems and Procedures
Inertial Navigation Systems		**RM/TC/DTWO/SHF**
Mission Planning (Comp Flight Planning)		Aircraft General/Technical Orders/Flight Manuals
Normal Procedures		Emergency Escape Systems and Procedures
Radar		Aircraft Interphone Systems
Timing Control		Emergency Procedures Communications Equipment
AA21	**AFI 11-202V2 Qualification Evaluation**. Required as a course completion item for all initial and mission qualification and requalification training. Partial checks are required in conjunction with difference training when difference qualification involves any new area in which not currently qualified.	

AG05	**Regulation and Directive Orientation**. Introduce those crew members who have completed a MAJCOM level instructor course to the command/wing specific regulations and directives associated with instructor upgrade training.
AG10	**Instructor Academic Training**. MAJCOM instructor course taught by Detachment 10 ACC Training Support Squadron, for those who have not attended a MAJCOM instructor course. Those not required by this manual to attend this course, may substitute in unit academic training.
AG18	**Aircraft Commander's Responsibilities**. Pilots must receive a comprehensive briefing on their responsibilities while performing aircraft commander duties. This briefing will include, but not limited to, command and control, chain of command, ICAO procedures, foreign clearance guide, billeting, security, aircraft performance and limitations, crew rest and crew duty day.
AG19	**Alert Aircraft Commander's Responsibilities**. Pilots must receive a comprehensive briefing on their responsibilities while performing alert aircraft commander duties. This briefing will include but not be limited to alert fuel loads, minimum onboard alert rations, alert chain of command and alert weather minimums and guidelines.
AG20	**ACS-S.** Written proficiency training exams or hands on training. Should consist of Operating Procedures, Mission Equipment, Alert and Emergency Procedures.
AG21	**ACS-R.** Written proficiency training exams or hands on training for continuation training. Should consist of Operating Procedures, Mission Equipment, Emergency Equipment, and Alert Procedures.
AG22	**ACS-D/A, ACS-D/B, RM-1/RM-2/TC-1/TC-2/SHF and DTWO**. Written proficiency training exams or hands on training for continuation training. Should consist of Operating Procedures, Mission Equipment, Emergency Equipment and Alert Procedures.
AG23	**ACS Instructor**. Written proficiency training exams or hands on training for continuation training. Should consist of flight instructor, principles of instruction, student motivation, preparing to teach, instructional techniques, instructional methods, training aids, student/instructor relationships, evaluation procedures, evaluation techniques, regulations and manuals, instructor survival, and training records.
AP01	**Precision Approach**. Dual credit with specific approaches.
AP04	**Non-precision Approach**. Credit when accomplishing any nonprecision approach as defined in AFM 11-217, *Instrument Flying*.
AP09	**Enroute Descent.**
AP20	**ILS (Manual) Approach.**
AP22	**Category II ILS**. Accomplished in accordance with the aircraft operations manual and AFM 11-217.
AP26	**Missed Approach (Manual)**
AP27	**Missed Approach (Autopilot)**. For Initial/Requalification, this event will not be accomplished until a briefing has been conducted by an instructor pilot on power requirements and programmed aircraft attitude.
AP30	**Circling Approach**.

AP31	**NDB Approach.**
AP39	**Instrument approach/missed approach simulated 3-engine.**
AP40	**PAR Approach.**
AP42	**Instrument Approach**. Dual credit with (AP01, AP04).
AP51	**Holding Pattern.**
AP56	**Approach (Monitored).** Includes all activity from departing cruise altitude for initial penetration or letdown to completion of descent and landing.
AP68	**Visual Pattern.** Approach to a runway without the aid of radio navigational aids or controller guidance.
AP70	**Proficiency Exercise (Pilot and Flight Engineer).** 1.5 hour block of transition, instrument and emergency procedures practice. Except for initial departure, once the block commences, do not disrupt for any other type of training (FE's exempt). Pilots must log IP or primary time for the entire block to award credit. Aircraft commanders must be supervised by an IP. IP's must accomplish 50 percent of their AP70's under the supervision of another IP (See AP80). Flight engineers will perform crew specialty functions required during this exercise. Accomplish the following: Instrument requirements: Instrument Departure Penetration (Enroute) Missed Approach Visual pattern and landing (weather permitting). Emergency Procedures. Accomplish as many practice emergency procedures as possible in the time and conditions permitting. Place particular emphasis on simulated systems malfunctions and simulated engine out operation. These may include but are not limited to: Simulated Engine Failure. Takeoff Continued. Approach and GoAround, Simulated 3engines Simulated 3engine landing Alternate Gear and Flap Lowering
AP80	**IP supervised IP Proficiency Exercise.** An IP accomplishing a AP70 under the supervision of another IP (including contract instructors) will log this event.
AP90	**Cat II/IIIA Certification**. Must be logged in conjunction with AP27 and LD41. Initial certification accomplished in conjunction with AA21 (AFI 11-202V2 qualification evaluation). During initial mission qualification, requalification, training or continuation training, log this event to signify satisfactory demonstration of CAT II/IIIa procedures to an instructor.
AR14	**Receiver Air Refueling, tanker autopilot off**. All axes of the tanker autopilot must be disengaged to satisfy receiver training requirements. Receiver pilots must practice contacts for a minimum of ten minutes.

AR15	**Receiver Rendezvous**. Credit with any type rendezvous (pilot must by pilot flying in order to log).
AR24	**Radio Silent, Visual Signals**. Accomplish IAW air refueling technical order 1-1C-1-28.
AR25	**Receiver Air Refueling**. Consists of air refueling including closure and contacts. The receiver pilot must accomplish ten minutes toggles engaged time and attempt to onload some amount of fuel. Toggles engaged time does not apply during tanker autopilot off refuelings or during higher headquarters missions. The flight engineer and the IPSS must complete all air refueling checklists for credit.
AR27	**Point Parallel Rendezvous**. A point parallel rendezvous using radar beacon, differential TACAN or computer DME, timing, DF steer, ATC/GCI assistance, or any combination of these. Dual log with AR15.
AR30	**Receiver Rendezvous Overrun Procedures**. Accomplish IAW air refueling technical order 1-1C-1-28.
AR32	**Enroute Rendezvous**. Procedure used when join-up is to be accomplished at an RZ PT at a scheduled time. Timing may be accomplished using ground speed control, orbit delay, or timing triangle. Dual log with AR15.
AR44	**Receiver Air Refueling Night**. Same as AR25 except it's accomplished between sunset and sunrise. FE/IPSS credit AR25.
AR46	**Receiver Air Refueling Breakaway Procedures**. Pilots must demonstrate proficiency in executing breakaway during refueling. N/FE should be able to describe circumstances and procedures for requesting a breakaway.

Table A2.2. "CE" Events.

CE01	**Console Equipment/Controls.** Consists of all equipment, consoles, and controls that are a part of the noted system or are used in conjunction with the noted system.
CE02	**Internal Communications Systems.** This is an instructor led demonstration and discussion of operations and related equipment to all interphone systems on aircraft.
CE03	**Electronic Switching System.**
CE04	**UHF Command Radio System.** An instructor guided discussion of the UHF Command Radio equipment locations, controls, and operation.
CE05	**Call Processing.** An instructor demonstration and student performance to accomplished on all possible incoming and out going calls.
CE06	**UHF Satellite Voice Radio System.** A discussion of UHF satellite voice control panel, PTPA, and equipment location and operation.
CE07	**HF Communication System.** A discussion of HF radio control heads, antenna locations, and HF system operations.
CE08	**MF Radio. A discussion of the purpose, control head, and system operation.**
CE09	**VLF/LF Communication System.** A discussion/overview for system familiarization.
CE10	**UHF Networks.** All UHF networks associated with the radio operators normal procedures.
CE11	**Special User Systems.** A discussion to consist of all related regulations, procedures and associated equipment.
CE12	**Secure Voice Systems.** A discussion of the secure voice panels, secure telephones, and all other associated secure voice equipment at the radio console.
CE13	**Message Processor System. Consist of software operations of MPS.**
CE14	**Message Processor System.**
CE15	**MWTTY.**
CE16	**SCT Network.**
CE17	**HF Networks.** Discussion of HF networks associated with the operator's normal and special operations.
CE18	**PSM Procedures.** Discussion procedures, regulations and equipment involved with this mission.
CE19	**UHF Satcom (AFSAT).**
CE20	**Secure Data Circuits.**
CE21	**MPS Procedures.** Consists of the basic operations of the Message Processing Equipment.
CE23	**UHF DAMA System.**
CE24	**EHF System.**
CE25	**EHF Net Procedures.**
CE27	**Force Report Back Procedures.** Procedures, regulations and definitions associated with the Radio Operators normal procedures.

CE28	**Encrypt/Decrypt/Authentication.** An instructor led demonstration and performance of all related documents encountered by Radio Operators.
CE29	**Operational Procedures.** A discussion of all daily and special procedures associated with the noted system.
CE30	**EAM Procedures.** A discussion of transmit, receive, and correction procedures for all types of Emergency Action Messages.
CE33	**Radio**. Should consist of the following as required by mission/sortie profile: CE01, CE02 CE04, CE05, CE06, CE07, CE08, CE10, CE11, CE12, CE17, CE18, CE27, CE28, CE29, CE30, GS30, GA13, ST00, ME19, GS26, ME20, GS70, GS38, AG05, AA20, AA21.
CE34	**SASS.** Should consist of the following as required by mission/sortie profile: CE01, CE02, CE05, CE10, CE11, CE29, CE30, GS30, ST00, ME19, GS26, ME20, GS70, AG05, AA20, AA21, and GS38.
CE35	**AUTODIN.** Should consist of the following as required by mission/sortie profile: CE01, CE02, CE16, CE21, CE28, CE29, CE30, GS30, ST00, ME19, GS26, ME20, GS70, AG05, AA20, AA21, and GS38.
CE36	**MILSTAR.** Should consist of the following as required by mission/sortie profile: CE01, CE02, CE19, CE23, CE24, CE25, CE27, CE28, CE29, CE30, GS30, ST00, GS26, ME20, GS70, AG05, AA20, AA21, GS38.
CE37	**LF/VLF.** Should consist of the following as required by mission/sortie profile: CE01, CE02, CE21, CE27, CE28, CE29, CE30, GS30, ST00, ME19, GS26, ME20, GS70, AG05, AA20, AA21, and GS38.
CE38	**Radio Maintenance One.** Assigned to this position and performed associated duties.
CE39	**Radio Maintenance Two**. Assigned to this position and performed associated duties.
CE40	**VLF PAC Operations (RM-1).** Operate PAC on the dual trailing wires.
CE41	**Crypto/Teletype.**
CE42	**SASS.** Assigned to this position and performed associated duties.
CE43	**Technical Control One.** Assigned to this position and performed associated duties.
CE44	**Technical Control Two.** Assigned to this position and performed associated duties.
CE45	**Airborne Performance Monitor.**
CE46	**Radio.** Assigned to this position and performed associated duties.
CE47	**Milstar.** Assigned to this position and performed associated duties.
CE48	**Autodin.** Assigned to this position and performed associated duties.
CE49	**Lowspeed.** Assigned to this position and performed associated duties.
CE50	**VLF/LF.** Assigned to this position and performed associated duties.
CE51	**SHF Operator/Maintenance.** Assigned to this position and performed associated duties.
CE52	**Message Processing System.** Performed associated duties.
CE53	**SHF SCT Injections.** Perform one successful EAM injection.

CE59	**TWA Cycle.** Consists of an extension and retraction of the trailing wire antenna, flight crew coordination, recording of position and completion of all log entries required for submission of the mission report.
CE62	**Communications Check Flight Procedures.** Verify GEP alignment per local directives
CE87	**Dual Trailing Wire Operations.** Assigned to this position and performed associated duties.

Notes:

1. CE01 through CE13. Reference T.O. lE-4B-43-1-1 and T.O. lE-4B-43-2-1.

2. CE14 through CE38. Reference as applicable. DOD, JCS, NAOC, USAF, MAJCOM, and local directives, Allied Communication Publications (ACPs), Joint Army, Navy, Air Force Publications (JANAPS), Operations Orders (OPORDs), Defense Satellite Communications Systems Operating Instruction (DOIs), KAOs, Technical Orders/Manuals, Crew member Aids (AAs), and Forms.

CE90	**TC-1 Console**	CE112	**Misc. Electronics**
CE91	**Cooling Air**	CE113	**Nationwide**
CE92	**Cooling Liquid**	CE114	**Portable VHF Radio System**
CE93	**Electrical Systems - AC**	CE115	**Automatic Switchboard**
CE94	**Electrical Systems - DC**	CE116	**Tape Recorder System**
CE95	**Electrical Load Summary Charts**	CE118	**CPI/Voice Recorder**
CE96	**TC-2 Console**	CE119	**VHF Command Radio System**
CE97	**MIB Knowledge**	CE120	**Weather Radar/Rend. Beacon**
CE98	**Ground Entry Point Knowledge**	CE121	**LRRA**
CE100	**Patch and Test Facility**	CE122	**TACAN**
CE101	**Circuit Config./Operations**	CE123	**IFF**
CE102	**CAPS**	CE124	**INSGPS**
CE103	**Receiver/Transmitter Group**	CE125	**VOR/ILS/Marker Beacon**
CE104	**AN/USC-28**	CE126	**DTWA Console**
CE105	**Single Channel Transponder**	CE127	**DTWA Controls and Indicators**
CE106	**SHF Console**	CE128	**DTWA Modes of Operation**
CE108	**FDMA**	CE129	**Antenna Pointing Group**
CE109	**MC3/Vocoder**	CE130	**ADP System**
CE110	**Multiplex System**	CE131	**Digital Wall Clock System**
CE111	**UHF/FDM**	CE132	**Ground Line Facilities**
		CE133	**MILSTAR**

Table A2.3. "DP" Events.

DP05	**Instrument departure**. Creditable for either radar vector or SID departure, under all meteorological conditions.

Table A2.4. "G" Events.

GA03	**AntiHijacking Procedures.** Conduct IAW AFI 13-207, *Preventing and Resisting Aircraft Piracy (HighJacking)*.
GA13	**COMSEC.** Accomplished by 1ACCS Comm COMSEC office. A TOP SECRET clearance is required before this can be accomplished.
GA23	**CRM.** Contractor provided Cockpit Resource Management training for P/N/FE.
GA48	**Cardiopulmonary Resuscitation Training (CPR).**
GS05	**Food Handlers.** Emphasis will be on E4 procedures.
GS09	**Simulator 1.** The crew will accomplish a training profile that includes normal operating procedures, instrument procedures including CATII/IIIa operations, and emergency procedures relating to the takeoff phase.
	Simulator 2. The crew will accomplish a training profile that includes normal operating procedures, various aircraft system malfunctions, emergency procedures and twoengine approach /landing procedures.
	Simulator 3. The crew will accomplish a simulated SIOP mission operating in an Eastern United States locale.
Note. Simulator Training Credit for each event is the same, however, 3 periods of 4 hours each for a total of twelve hours of contract simulator training per training period (semiannual) are required for each pilot and flight engineer. Refer to **Chapter 7** for lesson outlines.	
GS10	**Alert Start Procedures.** Accomplished in aircraft.
GS12	**Instructional Techniques.** Student instructor presents and demonstrates all phases of ground and flight activity. Includes technical data knowledge, applicable procedures, and their application.
GS14	**Briefing and Control of Passengers.** Demonstration of proficiency in knowledge of passenger briefing and control. Areas must include applicable operations manual and directive restrictions.
GS16	**Pre-takeoff Procedures.**
GS18	**Post-flight Procedures.** Demonstration of appropriate post-flight procedures to include transfer of aircraft to maintenance or oncoming crew, aircraft maintenance form annotations, and mission paperwork.
GS20	**Aircraft Systems and Equipment Operation.** Crew members must demonstrate proficiency in:
	Normal and emergency procedure knowledge of applicable aircraft systems (All, as applicable).
	Ground start/operations and taxi procedures with particular emphasis on visual marshaling contained in AFI 11-4011, *Aircraft Operation and Movement on the Ground*, (P, FE).

GS26	**Checklist Procedures/Use.** Demonstration of appropriate flight manual checklist procedures and air refueling checklists.
GS30	**Alert Procedures.** Consists of a discussion period and demonstration in the aircraft covering all alert checklists and phases of alert procedures. Included are: Aircraft Acceptance and Cocking Scramble Procedures Alert Start Uncocking and Recocking Onsite inspection tour (MOB/FOB). Physical layout of alert vehicle response routes, alert taxi routes for launch, increased posture, exercise recovery. Emphasize obstacles, sharp turns, taxi speed and additional hazards of weather and darkness. A thorough review of MAJCOM OPORD and host base supporting plans concerning MOB/FOB operations.
GS35	**USAF Instrument Refresher Course (IRC).**
GS37	**Proficiency Exam.** Administered and graded IAW AFI 11-202V2.
GS38	**Emergency Procedure Exam.** Administered and graded IAW AFI 11-202V2.
GS42	**Single Integrated Operations Plan (SIOP) Study.** Study of unit's classified mission.
GS44	**SIOP Mission Certification.** Demonstrate knowledge of all applicable mission requirements by each crew member specialty to an appropriate certifying official.
GS51	**Cockpit Procedural Trainer (CPT).** Aircraft systems refresher session.
GS52	**Emergency/Normal Procedures and Systems Review.**
GS53	**Cat II/IIIA Refresher.** A review of CATII/IIIa operating procedures normally accomplished during sim periods.
GS70	**Emergency Procedures.** Consists of demonstrated emergency procedure knowledge as outlined in the operations manual as applicable to each aircraft specialty
GS71	**Forms Knowledge.** Knowledge and completion of border clearance forms, to include General Declaration Form 7507, Individual Declaration and Form Declaration.
GS72	**Menu Planning.** Procurement of food, storage, preparation, presentation, timing, and customs/agriculture restrictions.
GS90	**Brief/Critique.** A complete and detailed pre-brief followed by a critique with the student for each mission or alert tour.
GS91	**Demonstration/Performance.** Teach a complete lesson using the demonstration/performance method of instruction.
GS92	**Lecture Method.** Teach a complete lesson using the lecture method of instruction.
GS93	**Discussion.** Teach a complete lesson using the discussion method of instruction.

Table A2.5. "L" Events.

LD00	**Landings, Total.** All landings will be multiple logged under this item.
LD01	**Landing, Day.** Used to track day landing currency.
LD02	**Landing, Night.** Used to track night landing currency.
LD10	**Landing, Short Field.** Pilot will demonstrate the ability to stop the aircraft within 6,000 feet of runway, turn aircraft around on the runway using no more than 150 feet turn diameter and return to takeoff position. Emphasis will be on a safe approach profile to provide touchdown with maximum runway remaining and ground handling techniques.
LD11	**Touch and Go Landing.** Instructor pilots and flight engineers accomplish to maintain currency. Loss of currency in this event results in supervised status in this event only. The individual is still considered mission ready and may be placed on alert.
LD13	**Landing, Full Stop.**
LD14	**Landing, Reverse Thrust.** Landing with use of reverse thrust.
LD33	**Approach/Landing Full Stop, Simulated 3 Engines.** Operations manual procedures.
LD41	**Category II or IIIA Autoland.** This event requires a fully coupled approach to touchdown. Dual-log with item LD00.
LS06	**Life Support Equipment Training.** Academic and equipment training in which aircrew members demonstrate their academic ability to locate, preflight, and use all aircrew and passenger LSE carried aboard unit aircraft or issued to crew members. Ensure crew members are briefed on the limitations and safety issues related to LSE.
LS08	**Egress Training, Non-ejection.** Evaluates the aircrew's ability to demonstrate use of aircrew and passenger LSE and primary and secondary air and ground egress points. Practice egress scenario to enforce the importance of aircrew coordination actions required for emergency situations. Ensure crew members are aware of their responsibilities for conducting safety briefings IAW AFI 11-202V3.

Table A2.6. "ME" Events.

ME19	**Mission Planning/Briefing (Student training).** This activity must be supervised by an instructor of like specialty for each training sortie. Accomplish mission planning and mission briefing IAW applicable directives. During mission planning, discuss appropriate aircraft and air refueling technical orders as they apply to the scheduled activity on the mission. FE's will compute weight and balance, TOLD, and appropriate aircraft performance for mission. For instructor upgrade, the candidate will brief all phases of the flight and maneuvers to be performed with emphasis on correct techniques, procedures and safety.
ME20	**Crew Coordination.** Instruct each crew member in the techniques and procedures for close coordination with other crew positions in accordance with the flight manual and applicable publications. Emphasize crew coordination during mission planning, preflight, and throughout each flight. Each crew member must understand the need for close crew coordination. The aircraft commander must demonstrate the ability to command a crew in an effective and efficient manner while performing pilot duties.

ME21	**Instructor/Evaluator Duties.** Only certified instructors/evaluators log this event when actually instructing or evaluating crew members of like specialty. Loss of currency in this event results in supervised status in this event only. The individual is still considered mission ready and may be placed on alert.
ME30	**Alert/Training Taxi Exercise.** This training event consists of alert engine start, and taxi to the runway hold line. Credit may be awarded by either of the following means: An alert taxi exercise accomplished while on ground alert. An alert start and taxi exercise accomplished on any training sortie.
ME90	**Rendezvous Procedures Exercise.** Consists of the following events: ME91, (ME92 for IPSS only), ME93, and LD10. Remain on the runway (if possible), accomplish taxi back checklist, accomplish Helo RZ procedures and make a downwind takeoff if conditions permit.
ME91	**Block Time Control Exercise.** Time Control from en route cruise to touchdown, overhead runway midpoint, or to final ramp parking destination. Accomplishment of ME93 in conjunction with this event is desired but not required. (In order for pilot to log, must be the pilot flying).
ME92	**Air Stair Operation.** Demonstrated proficiency in air stair operations in accordance with the operations manual.
ME93	**Helicopter Rendezvous Procedures.** Creditable whenever applicable rendezvous procedures and coordination are accomplished (timing problems or alert response). Actual helicopter rendezvous need not be accomplished to credit this training.
ME94	**Descent Procedures.** Demonstration of appropriate flight manual procedures for flying/monitoring the descent and landing phases of flight.

Table A2.7. "N" Events.

NE01	**Systems Navigation Leg.** Minimum duration is 30 minutes. Consists of two radar fixes (if available), an NE14, NE15, NE22, NE90, NE04 and a manual update. When accomplished, dual log with NE14, NE15, and NE22, NE90, NE04 as appropriate.
NE03	**Celestial Fix.** Locate, shoot and plot day/night celestial fixes in-flight, with at least three LOPs for each fix. Requires multiple body observation.
NE04	**Celestial Position.** Observation and plotting of at least three LOP's. May be credited when logging NE03.
NE11	**General Navigation.** Includes maintaining in-flight log/chart information, fixing, maintaining track, establishing reliable ETAs and meeting control times.
NE14	**INS/INU Continuous/Manual Update.** Demonstration of proficient INS continuous updating from DME stations. With FMS equipped aircraft, accomplish a manual INU update. Update difference need not be accepted for credit.
NE15	**INS/INU Bearing/Distance Update.** Demonstration of proficient INS/INU bearing/distance updating from TACAN and VOR/DME stations. Need not be accepted for credit.
NE21	**TWA Activity.** Credited when activity is accomplished. TWA activity is defined as extension, drag, or retraction activity, which requires the flight crew and communications crew to demonstrate knowledge of applicable TWA procedure in coordination with DTWO and RM operations.
NE22	**Continuous Three INS Mixing/INU Differential Updating.** Demonstration of appropriate procedures to accomplish mixing of 1, 2, or 3 INS computers. With FMS equipped aircraft, demonstrate the procedures to update an INU from another INAV solution.
NE36	**INS/FMS Operation.** Demonstration of proficiency in INS/FMS knowledge and procedures in accordance with the operations manual.
NE90	**Celestial Heading Check.** Compare INS heading with heading of observed body and cross-check.

Table A2.8. SORTIES.

SR41	**Pilot RAP Sortie.** To receive credit for SR41, all of the events in column A must be accomplished and at least 1 of the 4 events in column B must be accomplished. Alert, FEMA, or NCA support sorties may also be credited as a RAP sortie.	
	COLUMN A	**COLUMN B**
	ME30 Alert Taxi	AR25 Air Refueling
	LD10 Landing, Short Field "(Alert A/C only)"	AP68 Visual Pattern
	ME90 Rendezvous Procedures	NE21 TWA Activity
	AP42 Instrument Approach	AP26/AP27 Missed Approach (Man or Auto)
SR61	**Navigator RAP Sortie.** To receive credit for SR61, all of the events in column A must be accomplished and at least 1 of the events in column B must be accomplished. Alert, FEMA, or NCA support sorties may also be credited as a RAP sortie.	
	COLUMN A	**COLUMN B**

TO26 Departure (Monitored)	NE01 Systems Navigation Leg
ME30 Alert Taxi	AR15 Receiver Rendezvous
AP56 Approach (Monitored)	NE21 TWA Activity
ME91 Block Time Control Exercise	

SR71	**Engineer RAP Sortie.** An alert, FEMA, or NCA support sortie can count for a SR71 provided a preflight was accomplished and alert checklist procedures were used. To receive credit for a SR71 on other sorties, an engineer must accomplish a preflight, TO00 (Takeoff), LD13 (Landing, Full Stop), shutdown checklist, and at least two of the following events: LD11 Touch and Go Landing AR25 Air Refueling ME90 Rendezvous Procedures Exercise
SR81	**IPSS RAP Sortie.** To receive credit for SR81, the following events must be logged: ME90, ME92, and ME30.
ST00	**Sortie.** Credit whenever AFTO Form 781 time is logged and at least one training event in addition to ST00 is accomplished. (allows a sortie dual credit with RAP sortie, which are mutually exclusive)
SX17	**Communication/NAOC Sortie.** Log when flying with all communications crew positions manned, or when mission activity is in response to levied requirements of NAOC and the operations team is onboard.

Table A2.9. "TO" Events.

TO00	**Takeoff.** Normal takeoff procedures apply. May not be credited from a touch and go landing.
TO22	**Climb Procedures.** Procedures used from departure to level-off.
TO25	**Takeoff Engine Failure After V1.**
T026	**Departure (Monitored).**