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E-3 – AIRCREW EVALUATION CRITERIA

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This manual implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*; and is consistent with AFPD 11-4, *Aviation Service*; and Air Force Manual (AFMAN) 11-202V2, *Aircrew Standardization and Evaluation Program.* It establishes the minimum Air Force standards for qualifying personnel performing duties in the E-3. It applies to all civilian employees and uniformed members of the Regular Air Force and the Air Force Reserve operating E-3 aircraft. This publication does not apply to the Air National Guard or the United States Space Force. AF/Directorate of Operations (AF/A3) is the approval authority for changes to this instruction. This manual requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code (U.S.C.), Section 9013, Secretary of the Air Force. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFI 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Information Management System Records Disposition Schedule. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) listed above using the Air Force Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate chain of command to Air Combat Command/Airborne C2 Systems Branch (ACC/A3CA). Major Command (MAJCOM), Direct Reporting Unit (DRU) and Field Operating Agency (FOA) are to forward propose MAJCOM/DRU/FOA-level supplements to this volume to Air Force Director of Training and Readiness (AF/A3TF), through Air Combat Command (ACC)/ Flight Operations and Training Branch (A3TO) for approval prior to publication in accordance with AFI 11-200. The issuing office provides copies of approved and published supplements to

ACC/A3CA, and the user MAJCOM/DRU/FOA OPRs. Field units below MAJCOM/DRU/FOA level forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA OPR for post publication review. **Note:** The above applies only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with DAFI 33-360, *Publications and Forms Management.* The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See DAFI 33-360 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor's commander for non-tiered compliance items. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This interim change revises AFMAN 11-2E-3V2 by 1) adding Paragraph **1.4.3.4**, **2**) adding Area 49 -- Automation Management and Area 50 -- Pilot Monitoring grading criteria to Chapter **5**, **3**) replacing Tables **5.1** and **5.2** to reflect the new grading areas, and **4**) adding provisions to **Chapter 8** for pilots and flight engineers permanently assigned to an ACC recognized test unit to be authorized to gain and maintain a Multiple Qualification for AWACS DRAGON (DMA) and non-DMA aircraft. A margin bar (|) indicates newly revised material.

Chapter 1

GENERAL INFORMATION

1.1. General. This volume, in conjunction with AFI 11-202V2, provides both flight examiners and aircrew members with the procedures and evaluation criteria that will be used during aircrew evaluations. It is a reference document and a standard for training and operational purposes. Adherence to these procedures and criteria will ensure an accurate assessment of the proficiency and capabilities of aircrew members.

1.2. Roles and Responsibilities.

1.2.1. MAJCOM Director of Operations. The MAJCOM Director of Operations is responsible for establishing and managing the MAJCOM Standardization and Evaluation (Stan/Eval) program, in accordance with AFI 11-202V2.

1.2.2. Operations Group Commander. The Operations Group Commander is responsible for establishing and maintaining the unit-level Stan/Eval program and ensuring flight examiners administer evaluations in accordance with AFI 11-202, V2, and this publication.

1.2.3. Flight examiners are responsible for administering Stan/Eval programs in accordance with AFI 11-202V2, and this publication.

1.3. Waivers. Unless specified otherwise in the appropriate section, MAJCOM/A3 is the waiver authority for this publication, in accordance with AFI 11-202V2. Waivers will be requested from the parent MAJCOM Stan/Eval office through appropriate channels. **(T-2)**. Waiver authority for supplemental guidance will be specified in the supplement and approved through the higher-level coordination authority. **(T-1)**.

1.4. Procedures.

1.4.1. Flight examiners will use the criteria contained in this volume for conducting all E-3 aircrew evaluations. **(T-2)**. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria. **(T-2)**.

1.4.1.1. Prior to the evaluation, flight examiners will brief the examinee on the purpose, requirements, to include applicable evaluation criteria, of the evaluation and conduct of the evaluation. **(T-2)**.

1.4.1.2. Flight examiners will not intentionally fail any equipment during flight evaluations, but may deny the use of systems not affecting safety of flight. **(T-2)**.

1.4.1.3. The flight examiner will thoroughly debrief/critique all aspects of the flight. **(T-2)**. During the critique, the flight examiner will review the examinee's specific deviations, assigned area/sub area grades, required additional training, and overall qualification level. **(T-2)**.

1.4.1.4. The flight examiner should not occupy a primary crew position during evaluations, but may do so if conditions warrant.

1.4.1.5. The flight examiner will be qualified in the crew positions for which they are examining, except for as provided for by AFI 11-202V2. **(T-2)**.

1.4.1.5.1. An Evaluator Aircraft Commander (AC) may evaluate either ACs, First Pilots (FPs), or Copilots (CPs).

1.4.1.5.2. Evaluator Senior Directors (SD) may evaluate Air Weapons Officers (AWOs).

1.4.1.5.3. Evaluator AWOs may evaluate SDs on Area 29, Control.

1.4.1.5.4. Evaluator Air Surveillance Officers (ASOs) may evaluate Senior Surveillance Technicians (SST) and Airborne Surveillance Technicians (AST) positions.

1.4.1.5.5. Evaluator SSTs may evaluate ASTs.

1.4.2. ACs/FPs/CPs that are unqualified in the crew position being evaluated will have a qualified instructor/flight examiner AC in the other pilot position during engine start, taxi, takeoffs, air refueling, instrument approaches, and landings during the in-flight portion of the evaluation. **(T-2)**. The flight examiner will disregard minor deviations from tolerances for the purpose of clearing conflicting traffic provided that the examinee initiates timely corrective action. **(T-2)**.

1.4.3. Acceptance of evaluations from outside owning MAJCOM.

1.4.3.1. E-3 evaluations will be accepted between ACC, Air Force Reserve Command (AFRC), and Pacific Air Forces (PACAF). **(T-2)**.

1.4.3.2. Evaluations from the North Atlantic Treaty Organization (NATO) will not be accepted. Members require a current U.S. E-3 evaluation with an accompanying AF Form 8, *Certificate of Aircrew Qualification*, in accordance with AFI 11-202V2 and current MAJCOM supplement. Prior to evaluation, NATO qualified crewmembers must accomplish applicable difference training in accordance with AFMAN 11-2E-3V1, *E-3 Aircrew Training.* **(T-2)**.

1.4.3.3. Evaluations from any non-U.S. nations owning E-3 aircraft will not be accepted. **(T-2)**.

1.4.3.4. Evaluations from 605 TES/Det 1 (ACC component of AWACS Combined Test Force) will be accepted. **(T-2)**.

1.4.4. Administering evaluations outside MAJCOM. Unit flight examiners may administer evaluations outside of their organization, to include administering evaluations outside of their MAJCOM. If administering evaluations outside of the flight examiner's MAJCOM, the evaluation will be specifically requested by the MAJCOM Stan/Eval organization of the examinee and approved by the MAJCOM Stan/Eval organization of the examiner in accordance with AFI 11-202V2. **(T-2)**.

1.4.5. Flight Examiner Objectivity evaluations will be documented as "SPOT" evaluations in Section III, "Aircrew Evaluation Information," of the AF Form 8 with further description added in the "Mission Description" paragraph of Section VIII, "Comments". **(T-2)**.

1.5. Grading Policies.

1.5.1. Flight examiners will use the grading policies prescribed in AFI 11-202V2 and the evaluation criteria in this manual for conducting aircrew evaluations. **(T-2)**. Flight examiners

and crewmembers will be thoroughly familiar with the prescribed grading criteria in this manual. **(T-2)**.

1.5.2. A three-level grading system (Q, Q-, or U) will be used for all grading areas except those designated as “CRITICAL”. **(T-2)**.

1.5.3. Critical Grading Areas. Critical areas are defined as areas where marginal performance is unacceptable. A two-level grading system (Q or U) will be used for critical areas. **(T-2)**. If an examinee receives a "U" grade in any critical area, the overall grade of the evaluation will also be unqualified. Critical areas are identified by "(CRITICAL)" following the applicable area title.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General. This manual standardizes the criteria for instrument (INSTM), qualification (QUAL), mission (MSN), instructor (INSTR), requalification (RQ), emergency procedure (EPE), SPOT, and no-notice (N/N) evaluations. All evaluations will follow the guidelines set in AFI 11-202V2. Evaluation requirements are depicted in each crew position's evaluation criteria with grading areas identified in **Chapter 3**, **Chapter 4**, **Chapter 5**, **Chapter 6**, and **Chapter 7**. **(T-2)**.

2.1.1. Required Evaluation Areas. The Flight Examiner will evaluate the examinee's performance in all required areas annotated with an "R". **(T-2)**. Make every attempt to schedule/complete evaluations on the same sortie.

2.1.2. When a required area cannot be evaluated in flight, the area may be graded using simulation or a verbal evaluation. Flight Examiners will make every effort to evaluate required areas during the flight before resorting to alternative methods of evaluation. **(T-2)**. Flight examiners will annotate areas evaluated using alternate methods on the back of the AF Form 8. **(T-2)**.

2.2. Ground Phase Requisites. Except where specified, the following QUAL evaluation requisites are common to all crew positions and will be accomplished in accordance with AFI 11-202V2 and unit directives. **(T-2)**. The examinee must satisfy all ground phase requisites within their eligibility period to complete recurring evaluations or within six months of their initial (INIT) QUAL evaluation. **(T-2)**. Flight examiners will record these requisites, with the exception of the publications check, in Section II, "Requisite Information", on AF Form 8. **(T-2)**.

2.2.1. Closed Book Requisite Exam. Closed book questions will come from Master Question File/Local Operating Procedures (MQF/LOPs). **(T-2)**. These questions will emphasize system knowledge and information necessary for safe flight and mission accomplishment. **(T-2)**. If an aircrew member holds a multiple-qualification, the member will test for each qualification independently during each respective evaluation eligibility period. **(T-2)**.

2.2.2. Boldface (AC/FP/CP only). This exam must consist of one question concerning each emergency procedures immediate action item applicable to the individual's specialty. The answer must contain, verbatim from the flight manual, all immediate action items in proper sequence. **(T-2)**.

2.2.3. Open Book Requisite Exam. Open Book questions will come from publications containing information pertinent to the operation of the aircraft and performance of the assigned mission. **(T-2)**. The Open Book subject areas and the publications used to generate the exam will be made available to aircrew. **(T-2)**. Units may use a secure question bank as the source for some or all of the open book examination questions. **Note:** Open and Closed Book test requirements will be based on the qualification level of the examinee. **(T-2)**. If an aircrew member holds a multiple-qualification, the member will test for each qualification independently during each respective evaluation eligibility period. **(T-2)**.

2.2.4. Publications Check. Flight examiners will accomplish a thorough publications check on all publications required for the mission. **(T-2)**. Publications are identified in accordance with local Stan/Eval directives.

2.2.5. Emergency Procedures Evaluation (EPE). An EPE is required for all aircrew members within the eligibility period for required evaluations in accordance with AFI 11-202V2.

2.2.5.1. Flight examiners will conduct ACs, FPs, CPs, and Flight Engineer (FE) EPEs in the simulator (SIM) in accordance with **paragraph 2.3**. **(T-2)**.

2.2.5.2. Navigator (NAV) and Mission Crew EPEs may be evaluated during flight or verbally on the ground, but will be evaluated as a ground requisite item only. Flight examiners will document downgrades in the Emergency Equipment/Procedures grading area for NAVs and Mission Crew members will be documented as a Ground (EPE) discrepancy. **(T-2)**.

2.2.6. ACs, FPs, CPs, and NAVs must complete the requisite INSTM Examination requirement in accordance with AFMAN 11-210, *Instrument Refresher Program (IRP)*. **(T-2)**.

Table 2.1. Requisites.

Test Type	Aircraft Commander /First Pilot/Copilot		Navigator	Flight Engineer	Mission Crew	
	QUAL/MSN	INSTM	QUAL/MSN	QUAL/MSN	QUAL	MSN
OPEN BOOK	R		R(2)	R	R	
CLOSED BOOK	R		R(2)	R	R	
INSTRUMENT EXAM		R	R(2)			
EPE	R		R(2)	R	R	R(1)
BOLD FACE	R					

Note:

1. In accordance with AFI 11-202V2, a single EPE may be used for separate evaluations (e.g., a MSN and QUAL evaluation) as long as the combined EPE is of a scope and duration to cover required areas and is conducted within the requisite zone for each evaluation.
2. Not applicable for DRAGON modified aircraft (DMA).

Key:

R - Required

2.3. Flight Simulator (SIM) Evaluation Procedures. For ACs, FPs, CPs, and FEs, the EPE will be conducted in the Operational Flight Trainer (OFT). **(T-2)**. For ACs/FPs/CPs only, the instrument (INSTM)/QUAL/mission (MSN) evaluation may also be conducted in the OFT. Normally, the EPE will be conducted separately from the INSTM/QUAL/MSN evaluation, but may be combined. All evaluations will be conducted in accordance with the criteria in **Chapter 3** and **Chapter 4**, and will be administered by a flight examiner. **(T-2)**. Units will outline local procedures/profiles to accomplish all SIM evaluation requirements below. **(T-2)**.

2.3.1. Emergency Procedure Evaluation (EPE – AC/FP/CP/FE). During the EPE, the following requirements will be accomplished: **Note:** Units will develop local procedures/profiles to accomplish these requirements. **(T-2)**.

2.3.1.1. Unusual attitudes (ACs/FPs/CPs only). **(T-2)**.

2.3.1.2. Initial buffet/stick shaker recovery (ACs/FPs/CPs only). **(T-2)**.

2.3.1.3. Low visibility approach and landing (ACs/FPs/CPs only; graded under Precision Approach and Landing). **(T-2)**.

2.3.1.4. Systems operation, normal/emergency (minimum of eight systems). **(T-2)**.

2.3.1.5. Three-Engine Rudder Boost Out or two-engine approach, to a landing or go-around. **(T-2)**.

2.3.2. When a SIM is not available, the EPE may be conducted in a cockpit procedural trainer, or through verbal discussion on the ground.

2.4. Mission (MSN) Evaluation.

2.4.1. Mission Profiles. Mission profiles will accomplish the following: reflect unit daily training mission and tasking, and provide realistic assessment of the examinee's capabilities and the application of current tactics. **(T-2)**. Units will define scenarios and will include a scenario and other operational information that is available in theater, such as Air Tasking Orders, Airspace Control Orders, Special Instructions, operational tasking data link (OPTASKLINK), intelligence data, etc. **(T-2)**.

2.4.2. Evaluations will be accomplished on mission/combat training sorties, or theater sorties (if deployed, with Detachment Commander (DETCO) approval) to the maximum extent possible. **(T-2)**. The examinee will demonstrate knowledge and abilities in all required areas on E-3 specified mission profiles in accordance with **Chapter 2** of this manual. **(T-2)**. If all required areas cannot be evaluated on a single sortie, remaining areas will be evaluated in the SIM, on a subsequent sortie, or by verbal evaluation in a ground evaluation scenario. **(T-2)**.

2.4.2.1. Examinees will be evaluated in the crew position of their highest qualification/certification. **(T-2)**. If briefed, and at the flight examiner's discretion, portions of the evaluation may be flown as another crew position. However, the emphasis is to evaluate examinees as their highest qualification. Based on the examinee's experience level, a crewmember may be required to brief (to include tactics) and/or lead certain phases of the mission, but will not be evaluated using higher grading criteria: e.g., an experienced crewmember who does not hold an INSTR QUAL and is not on an INSTR QUAL evaluation, providing instruction to another crewmember at the discretion of the flight examiner, will not be held to the instructor grading criteria. **(T-2)**.

2.4.2.2. Mission Simulator Evaluation Procedures. The mission SIM or sim-over-live in-flight may be used to administer any portion of a flight evaluation not requiring a specific live scenario. Simulation may be used to complete flight evaluations, accomplish additional training, or conduct reevaluations. The flight examiner determines if use of simulation is effective.

Chapter 3

GENERAL GRADING AREAS

3.1. General Grading Areas (All Crew Position Evaluations). Flight examiners will use **Table 3.1** for all evaluation types. **(T-2)**.

Table 3.1. General Grading Areas (All Crew Position Evaluations).

AREA	DESCRIPTION	QUAL/MSN/SPOT
1	Airmanship (CRITICAL)	R
2	Aircrew Discipline (CRITICAL)	R
3	Safety (CRITICAL)	R
4	Cockpit/Crew Resource Management (CRM) (CRITICAL)	R
5	Publications/Personal and Professional Equipment	R
6	Mission Planning	R
7	Preflight/Ground Operations	R
8	Emergency Equipment/Procedures	R(1,2,3)
9	General/Systems Knowledge	R(3)
10	Communications/Coordination	R
11	Operational Security (OPSEC)/ Communications Security (COMSEC)	R(4)
12	Checklist Usage	R
13	Post-Flight/Mission	R
14	Briefings/Debriefings	R
15	Documentation	R
16	E-3 Defense Procedures	R(4)

Note:

1. The SIM EPE satisfies requirement for ACs/FPs/CPs and FEs.
2. BOLD FACE (CRITICAL) will be evaluated during SIM EPE. **(T-2)**.
3. May be accomplished either verbally or in the Aircrew Training Device (ATD).

(ACs, FPs, CPs, and FEs, see **paragraph 2.3.**)

4. Required area for MSN Evaluation only.

Key:

R – Required. Areas only required for SPOT evaluation if utilized to update evaluation expiration date.

3.2. General Grading Criteria.

3.2.1. Area 1 -- Airmanship (CRITICAL).

3.2.1.1. **Q** . Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Made appropriate decisions based on available information and sound judgment.

3.2.1.2. **U** . Decisions or lack thereof, resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that safety could have been compromised.

3.2.2. Area 2 -- Aircrew Discipline (CRITICAL).

3.2.2.1. **Q** . Provided required direction/information. Correctly adapted to meet new situational demands. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.2.2.2. **U** . Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Failed to exhibit strict flight or crew discipline. Intentionally violated or ignored rules or instructions.

3.2.3. Area 3 -- Safety (CRITICAL).

3.2.3.1. **Q** . Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment. Identified and assessed risk appropriately. Properly considered consequences of decisions.

3.2.3.2. **U** . Was not aware of or did not comply with all safety factors required for safe operations or conduct of the mission. Did not adequately identify and/or assess risk. Operated the aircraft and/or mission and emergency equipment in a dangerous manner.

3.2.4. Area 4 -- Cockpit/Crew Resource Management (CRM) (CRITICAL). In accordance with AFI 11-202V2, CRM skills will be evaluated for all crewmembers. **(T-2)**. CRM is an encompassing term that can be separated into seven specific skills. Those skills and further guidance on CRM can be found in AFI 11-290, *Cockpit/Crew Resource Management Program*.

3.2.4.1. At a minimum, the four skills listed below will be evaluated for all E-3 crewmembers:

3.2.4.1.1. Crew/Flight Coordination. **(T-2)**.

3.2.4.1.2. Risk Management/Decision-Making. **(T-2)**.

3.2.4.1.3. Situational Awareness. **(T-2)**.

3.2.4.1.4. Task Management. **(T-2)**.

3.2.4.2. **Q** . Effectively coordinated with other aircrew members. Demonstrated basic knowledge of other crewmembers' duties and responsibilities. Provided timely direction or information, as required, which clarified/rectified a situation. Efficiently used available resources to manage workload and maximize mission success.

3.2.4.3. **U** . Failed to coordinate with other aircrew members, which jeopardized mission accomplishment. Did not provide timely direction/information, which would have

clarified/rectified a situation. Unsatisfactory knowledge of other crewmembers' duties and responsibilities negatively affected mission accomplishment or safety of flight. Did not use available resources to manage workload.

3.2.5. Area 5 -- Publications/Personal and Professional Equipment.

3.2.5.1. **Q** . Possessed all required personal/professional equipment. Publications were current, contained only minor deviations or errors and usable for any of the unit's missions.

3.2.5.2. **Q** -. Did not have all required personal/professional equipment. Publications contained minor deviations/omissions. Did/would not impact flight safety or mission accomplishment.

3.2.5.3. **U** . Did not have all required personal/professional equipment. Publications contained major deviations/omissions. Did/would impact flight safety or mission accomplishment.

3.2.6. Area 6 -- Mission Planning.

3.2.6.1. **Q** . Checked all factors applicable to flight. Ensured live or simulated activity was correct and adequately coordinated, deconflicted, and briefed. When required, correctly interpreted information and extracted necessary information from available and applicable sources. Thoroughly analyzed plans to identify potential problem areas. Checked for possible contingencies. Planned for alternate missions as required. Adhered to specific crew position mission planning guidance in accordance with AFMAN 11-2E-3V3, *E-3 Operations Procedures* and applicable governing publications.

3.2.6.2. **Q** -. Mission planning included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

3.2.6.3. **U** . Mission planning procedures and products were incomplete or incorrect. Errors or omissions could have jeopardized mission accomplishment or flight safety.

3.2.7. Area 7 -- Preflight/Ground Operations.

3.2.7.1. **Q** . Read all applicable items in the Flight Crew Information File (FCIF) prior to stepping to the aircraft. Completed all checks and procedures, in a timely manner, prior to takeoff in accordance with tech orders, checklists, and instructions/manuals. As required, reviewed applicable aircraft documents/inspection reports for mission impact. When required, took corrective action on the ground for system issues or malfunctions and coordinated potential mission impact.

3.2.7.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

3.2.7.3. **U** . Errors or omissions could have/did jeopardized mission accomplishment or flight safety. Demonstrated unsatisfactory knowledge.

3.2.8. Area 8 -- Emergency Equipment/Procedures (AC, FP, CP, and FE, see additional guidance in **Table 3.1**).

3.2.8.1. **Q** . Recognized actual/simulated malfunctions. Applied proper corrective actions. Effectively used checklist/flight manual. Effectively performed primary emergency duties and/or was thoroughly familiar with emergency duties. Effectively

coordinated emergency actions with other crewmembers without delay or confusion. When required, demonstrated thorough knowledge of mission impact due to equipment failure/loss.

3.2.8.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge, minor deviations or omissions in describing/accomplishing the required steps of the emergency procedure.

3.2.8.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety and/or damaged aircraft equipment.

3.2.9. Area 9 -- General/Systems Knowledge.

3.2.9.1. **Q** . Demonstrated proper management and operation of systems and equipment. Correctly identified and located system components, explained and interpreted their functions, capabilities, and limitations. Effectively demonstrated knowledge of mission employment, roles, and responsibilities. Demonstrated knowledge of mission related external agencies and threats to mission accomplishment.

3.2.9.1.1. AC/FP/CP/FE. Demonstrated knowledge of systems listed in **Table 3.2**, ensuring operations within prescribed limits. Properly diagnosed system problems/malfunctions. Explained/executed proper corrective action for each type of malfunction.

3.2.9.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge. Stated correct system status, but could not determine its effect on related systems.

3.2.9.2.1. AC/FP/CP/FE. Knowledge of systems, **Table 3.2**, and/or operating limits was marginal. Slow to analyze system problem or apply proper corrective action.

3.2.9.3. **U** . Errors or omissions could have/did jeopardized mission accomplishment or flight safety. Exceeded "Q-"grading criteria.

3.2.9.3.1. AC/FP/CP/FE. Unsatisfactory knowledge of systems listed in **Table 3.2**.

Table 3.2. Systems Operation (Normal/Emergency).

System
Electrical
Hydraulic/Pneumatic
Air Conditioning/Bleed Air
Pressurization
Electronic Cooling
Engine/Engine Systems
Fuel
Ice/Rain Protection

Auxiliary Power Unit (APU)/APU Systems
Oxygen/Lighting Equipment
Landing Gear/Wheels/Brakes
Flight Controls
Fire Protection/Extinguishing
Instruments/Communications/Flight Management Systems
Note: - A minimum of eight systems will be evaluated. **(T-2)**. - These systems may be observed/discussed in the SIM, during flight, or during mission planning/debrief. - Documentation of discrepancies will specify the affected system.

3.2.10. Area 10 -- Communications/Coordination.

3.2.10.1. **Q** . Effectively monitored, understood, and executed proper internal/external communications/coordination. Communications were standard, clear, and concise. Examinee effectively configured/operated communication equipment applicable to their position.

3.2.10.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge. Made lengthy transmissions and/or used non-standard communications.

3.2.10.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety.

3.2.11. Area 11 -- OPSEC/COMSEC.

3.2.11.1. **Q** . Used proper OPSEC/COMSEC procedures, when required. Demonstrated knowledge of authenticators and authentication procedures (as applicable). Maintained positive control of OPSEC and COMSEC materials. When required, performed inventory of OPSEC/COMSEC materials. Controlled and used classified/COMSEC material in accordance with applicable directives.

3.2.11.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge. No security deviations or compromises occurred.

3.2.11.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety and/or caused security deviations or compromises.

3.2.12. Area 12 -- Checklist Usage.

3.2.12.1. **Q** . Used correct checklists throughout the mission and gave the correct response at the appropriate time.

3.2.12.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety.

3.2.12.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety.

3.2.13. Area 13 -- Post-Flight/Mission.

3.2.13.1. **Q** . Completed all post-flight checks and procedures in accordance with applicable flight manual, checklist, and applicable directives. Completed appropriate forms and paperwork as applicable.

3.2.13.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

3.2.13.3. **U** . Errors or omissions could have jeopardized future mission accomplishment or flight safety and/or damaged aircraft equipment.

3.2.14. Area 14 -- Briefings/Debriefings.

3.2.14.1. **Q** . Effectively organized and professionally presented briefings and debriefings in a logical sequence. Covered all applicable items in accordance with all governing directives. When required participated in or conducted initial, coordination, retrograde, specialized, step summary, execution and crew brief/debriefs. Prepared for brief at the designated briefing time.

3.2.14.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

3.2.14.3. **U** . Information was incorrect, misleading, or missing and could have jeopardized mission accomplishment or flight safety.

3.2.15. Area 15 -- Documentation.

3.2.15.1. **Q** . All required forms, reports, and logs were complete and accurate in accordance with applicable directives.

3.2.15.2. **Q** -. Errors, omissions, or deviations caused some information to be omitted or incorrectly reported.

3.2.15.3. **U** . Important information or major events omitted or reported incorrectly, which affected mission accomplishment or reconstruction of the mission.

3.2.16. Area 16 -- E-3 Defense Procedures.

3.2.16.1. **Q** . Properly explained/executed E-3 Defense procedures in a timely/accurate manner in accordance with established guidance (i.e., Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1.AWACS, *Tactical Employment*, AFTTP 3-3.AWACS, *Combat Aircraft Fundamentals*, and Theater Directives).

3.2.16.2. **Q** -. Explained/executed E-3 Defense procedures with minor errors or omissions that did not jeopardize E-3 safety or mission accomplishment.

3.2.16.3. **U** . Unfamiliar with and/or unable to explain/execute E-3 defense procedures with errors or omissions that could have jeopardized E-3 safety or mission accomplishment.

Chapter 4

INSTRUCTOR EVALUATIONS

4.1. Instructor (INSTR) Evaluation. (T-2). All flying personnel selected for instructor duty must be evaluated on judgment, technical knowledge, instructor ability (including error analysis of student activity), and use of grading documents as well as proficiency in their aircrew specialty. **(T-2)**. To initially qualify as an instructor, a crewmember must successfully complete an INIT INSTR evaluation. **(T-2)**. INIT INSTR evaluations may be conducted in conjunction with the examinee's periodic qualification evaluation and should be accomplished on actual instructional missions whenever possible. The ability of aircrew members to instruct will be evaluated during all subsequent periodic evaluations. **(T-2)**.

4.1.1. Instructors must demonstrate proficiency by instructing an actual student whenever possible (or qualified individual acting as a student). **(T-2)**. The examiner may require the examinee to present verbal explanations of equipment operations, procedures, and techniques pertinent to their crew position duties and responsibilities.

4.1.2. Instructor Pilot (IP) Evaluations. In addition to all AC QUAL/INSTM requirements in this manual, IP evaluations will include the following:

4.1.2.1. Air Refueling Demonstration (in flight), touch-and-go landing as pilot flying (PF) or pilot monitoring (PM) (in flight or in the SIM), abnormal flap landing (in flight or in the SIM) or landing attitude demonstration as pilot flying (in flight). **(T-2)**. Deficiencies in these events are to be documented in Area 19, Demonstration and Performance, unless the deficiency is due to errors performing the basic maneuver (i.e., Landing or Air Refueling), which are graded in the corresponding grading area.

4.1.2.2. INIT INSTR evaluations will be administered with the examinee in the right seat. **(T-2)**. An IP/flight examiner will be in the left seat for maneuvers that require IP/flight examiner supervision. **(T-2)**.

4.1.2.3. INIT INSTR evaluations will include all areas on AC evaluations in accordance with **Chapter 3** and **Chapter 5**. **(T-2)**. The examinee must accomplish a takeoff, instrument approach, and touch-and-go landing from the right-seat. **(T-2)**.

4.1.2.4. Recurring evaluations may be administered with a student AC, FP, CP, IP, or Flight Examiner occupying the other pilot position. The examinee may occupy either the left or the right seat on recurring evaluations unless the flight examiner desires a specific position. The flight examiner will evaluate the instructor's ability to recognize student difficulties and provide effective, timely corrective action. **(T-2)**. Recurring evaluations will be administered in conjunction with required qualification flight evaluations and will include all areas using both QUAL and INSTR criteria. **(T-2)**.

4.1.3. Other Aircrew Instructor Flight Evaluations. Instructor flight evaluations will be conducted with a student occupying the applicable aircrew position whenever possible. **(T-2)**. The student will perform those duties prescribed by the instructor for the mission being accomplished. **(T-2)**.

4.1.3.1. The instructor examinee will monitor all phases of flight from an advantageous position and be prepared to demonstrate or explain any area or procedure. **(T-2)**.

4.1.3.2. The flight examiner will evaluate the instructor's ability to recognize student difficulties and provide effective, timely corrective action. **(T-2)**.

4.1.3.3. Recurring evaluations will be administered in conjunction with required qualification flight evaluations and will include all areas using both QUAL and INSTR criteria. **(T-2)**.

4.1.3.4. During all instructor evaluations (with the exception of INIT INSTR-only evaluations), the examinee must occupy the seat position for a sufficient period of time to demonstrate their proficiency in the crew position. **(T-2)**. The flight examiner determines the timing and duration, within the mission profile, when the examinee will occupy the seat position in order to sufficiently evaluate the examinee's proficiency in their crew position. This can be determined during mission planning or during the course of the mission.

4.2. Grading Areas. All instructors will be graded using the criteria stated in **Table 4.1**. **(T-2)**.

Table 4.1. Instructor Evaluation Required Grading Areas.

AREA	DESCRIPTION	INSTR
17	Instructional Ability	R
18	Briefings/Debriefings/Critique	R
19	Demonstration and Performance	R

Note: A grade of "U" in any of Areas 17-19 results in an overall grade of 3 for the instructor portion of the evaluation. **(T-2)**. Examinee is responsible for knowledge of Areas 1-16 in **Table 3.1.** and crew position specific requirements.

Key:

R - Required

4.2.1. Area 17 -- Instructional Ability:

4.2.1.1. **Q** . Demonstrated ability to communicate effectively. Provided appropriate corrective guidance when necessary. Planned ahead and made timely decisions.

4.2.1.2. **Q** -. Demonstrated difficulty in communicating with student. Provided untimely or inappropriate corrective guidance in minor areas or managed time poorly. These minor deviations did not adversely affect safety or mission accomplishment, or adversely affect student progress.

4.2.1.3. **U** . Demonstrated an inability to effectively communicate with student. Did not provide corrective guidance where necessary. Did not plan ahead or anticipate student problems. Deviations adversely affected safety or mission accomplishment, or adversely affected student progress.

4.2.2. Area 18 -- Briefings/Critique:

4.2.2.1. **Q** . Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Displayed ability during the critique to reconstruct the flight, offer mission analysis, and provide corrective guidance where appropriate. Completed all training documents in accordance with

prescribed directives. Training syllabi grades reflected actual performance of student relative to standard. Provided complete, comprehensive comments on training documentation. Correctly identified student's strengths and weaknesses. Pre-briefed the student's next mission.

4.2.2.2. **Q** -. Minor errors or omissions in briefings, critique, and/or training documents did not affect student progress.

4.2.2.3. **U** . Briefings were marginal or nonexistent. Did not review student's training folder or past performance. Failed to adequately critique student or provide complete mission analysis. Training syllabi grades did not reflect actual performance of student. Comments in training documentation were incomplete. Strengths and weaknesses were not identified. Overlooked or omitted major discrepancies in the documentation. Incomplete or nonexistent pre-briefing of student's next mission.

4.2.3. Area 19 -- Demonstration and Performance:

4.2.3.1. **Q** . Effectively demonstrated procedures and/or techniques on the ground and/or in flight, making clear distinctions between them. Demonstrated thorough knowledge of aircraft systems, procedures, and all applicable publications and regulations.

4.2.3.2. **Q** -. Demonstration of procedures and/or techniques not always effective. Did not always distinguish between procedures and techniques. Minor discrepancies in knowledge of aircraft systems, procedures, and/or applicable publication and regulations. Minor discrepancies did not affect safety or adversely affect student progress.

4.2.3.3. **U** . Did not demonstrate correct procedures and/or techniques. Did not or could not distinguish between procedures and techniques. Insufficient knowledge of aircraft systems, procedures, and/or applicable publications and regulations. These deviations could have affect safety or adversely affect student progress.

Chapter 5

FLIGHT CREW EVALUATIONS

5.1. General. This chapter contains the task-oriented criteria for all evaluations in accordance with AFI 11-202V2 and AFI 11-401, *Aviation Management.* Evaluation requirements are outlined in matrices for IP, AC, FP, CP, NAV, and FE.

5.2. Instructor Pilot, Aircraft Commander, First Pilot, Copilot Qualification/Mission (QUAL/MSN) and Instrument (INSTM) Flight Evaluations.

5.2.1. General. This section contains guidance for QUAL/MSN and instrument evaluations of IP, AC, FP, and CP, to include INSTM/QUAL/MSN flight evaluations.

5.2.1.1. INSTM/QUAL/MSN evaluations will encompass all areas identified in **Table 3.1** and **Table 5.1** or **Table 5.2** except as noted below. **(T-2)**. The examinee must demonstrate a degree of knowledge and proficiency essential for successful mission accomplishment and safety of flight. **(T-2)**.

5.2.1.1.1. INIT QUAL. Contact position does not apply to CP candidates and may be deferred by FP candidates. If the requirement for the contact position is deferred for an FP, the flight examiner will annotate the restriction on the AF Form 8 in accordance with AFI 11-202V2. **(T-2)**.

5.2.1.1.2. FP candidates who successfully demonstrate proficiency in Air Refueling may accomplish the complete Air Refueling qualification, including the Contact Position, as part of their INIT QUAL Training flight evaluation at the discretion of the 966 Airborne Air Control Squadron Commander (AACS/CC).

5.2.1.1.3. FPs may accomplish an air refueling SPOT evaluation that includes the Contact Position (Area 29, Air Refueling), to remove an Air Refueling restriction. Once the restriction is removed, subsequent INSTM/QUAL evaluations will require a full evaluation of Area 29, Air Refueling. FPs must successfully accomplish an Air Refueling evaluation, to include the Contact Position, no later than their next INSTM/QUAL/MSN evaluation. **(T-2)**.

5.2.1.1.4. CPs may accomplish an air refueling SPOT evaluation that includes the Contact Position (Area 29, Air Refueling), to become air refueling qualified. Once qualified, all subsequent INSTM/QUAL evaluations will require full evaluation of Area 29, Air Refueling. **(T-2)**.

5.2.1.1.5. CPs will not be evaluated in Area 44, Simulated Engine(s) Out Pattern/Landing, or Area 45, Simulate Engine(s) Out Go-Around. **(T-2)**.

5.2.1.2. INSTM/QUAL/MSN evaluations may be conducted on either pilot proficiency or mission sorties (combat training sorties, surveillance sorties, etc.). If conducted on a sortie where Area 28, On-Station Procedures, is not performed, the flight examiner will be verbally evaluate this area. **(T-2)**.

5.2.1.3. Use of flight crew SIM for Flight Phase portions of the evaluation.

5.2.1.3.1. Area 38, Holding, may be evaluated in the ATD and graded during the EPE, or a separate ATD sortie, due to time/mission constraints.

5.2.1.3.2. Flight Phase areas may be evaluated in the OFT in accordance with AFI 11-202V2 except for areas listed below:

5.2.1.3.2.1. For INIT/RQ/QUAL evaluations, the following area(s) will be evaluated during a live sortie: Area 24, Takeoff; Area 29, Air Refueling; Area 43, Visual Flight Rules (VFR) Approach (Base, Final Turn, Final Approach), Area 44, Simulated Engine(s) Out Pattern/Landing; and Area 47, Landing. **(T-2)**.

5.2.1.3.2.2. Area 29, Air Refueling, when the examinee is qualified to air refuel in the contact position or is seeking such qualification.

5.2.1.3.3. Areas evaluated in the OFT to finish an incomplete aircraft evaluation the flight examiner will be documented in Section III of the AF Form 8, under "Aircrew Evaluation Information" as a "SIM INSTM/QUAL/MSN". **(T-2)**. In Section VIII, the mission description will be documented as "Second Sortie". **(T-2)**.

5.2.1.4. Either a computer flight plan (CFP) or a manual flight plan may be used for qualification evaluations.

5.2.2. Evaluation Objectives:

5.2.2.1. INSTM Evaluation. The examinee must demonstrate the ability to operate the aircraft under instrument flight conditions using appropriate flight manuals, directives, and operating procedures. **(T-2)**.

5.2.2.2. QUAL/MSN Flight Evaluation. The examinee must demonstrate the ability to accomplish the mission and operate the aircraft and systems using appropriate flight manuals, directives, and operating procedures. **(T-2)**.

5.3. Navigator QUAL/MSN Flight Evaluations.

5.3.1. General. This section contains guidance for QUAL/MSN evaluations for the NAV and Instructor NAV (INAV) crew positions.

5.3.2. INIT/QUAL/MSN and initial instructor evaluations will encompass all areas identified in **Table 3.1** and **Table 5.1**. **(T-2)**. The examinee must demonstrate a degree of knowledge and proficiency essential for successful mission accomplishment and safety of flight. **(T-2)**. Additionally, instructor examinees must demonstrate/perform Area 31, Global Positioning Integrated Navigation System (GINS) Operations, and provide instruction in Area 29, Air Refueling, as a minimum. **(T-2)**.

5.3.3. Either a CFP or a manual flight plan may be used for qualification evaluations.

5.4. Flight Engineer (FE) QUAL/MSN Flight Evaluations.

5.4.1. General. This section contains the task-oriented criteria for QUAL/MSN evaluations of a FE and Instructor Flight Engineer (IFE).

5.4.1.1. INIT/QUAL/MSN, QUAL/MSN, and INIT/INST/QUAL evaluations will encompass all areas identified in **Table 3.1** and **Table 5.1** or **Table 5.2**. **(T-2)**. The examinee must demonstrate a degree of knowledge and proficiency essential for successful mission accomplishment and safety of flight. **(T-2)**.

5.4.1.2. DD Form 365-4, *Weight and Balance Clearance Form F*. Examinee will complete/accomplish the DD Form 365-4 utilizing the load adjuster, computerized load

adjuster, or other MAJCOM approved method. **(T-2)**. Completion of the Form F may be evaluated during the written examination.

5.4.2. QUAL/MSN Evaluation. The examinee must demonstrate the ability to accomplish all required duties safely, effectively, and in accordance with appropriate flight manuals, directives and operating procedures. **(T-2)**. Examiners will conduct FE qualification evaluations on a live E-3 sortie. **(T-2)**.

5.5. Ground Phase Requisites. Requisites are listed in **paragraph 2.2**.

5.6. Criteria. Flight examiners will evaluate the areas identified in **Table 5.1** and or **Table 5.2** [With-DMA] using the grading policy in AFI 11-202V2 and any criteria listed within the individual areas. **(T-2)**.

Table 5.1. Flight Crew Evaluation Requirements.

AREA	DESCRIPTION	AC	FP	CP	NAV	FE
20	Takeoff and Landing Data (TOLD)	I, Q/M	I, Q/M	I, Q/M		Q/M
21	Weight and Balance	Q/M				Q/M
22	Flight Plan/Charts				Q/M	
23	Air Traffic Control (ATC)	I, Q/M	I, Q/M	I, Q/M		
24	Takeoff	I, Q/M(1)	I, Q/M(1)	I, Q/M(1)	Q/M	Q/M
25	Departure/Climb-Out	I, Q/M	I, Q/M	I, Q/M	Q/M	Q/M
26	Level-Off	I, Q/M	I, Q/M	I, Q/M		
27	Cruise/Navigation	I, Q/M	I, Q/M	I, Q/M	Q/M	Q/M
28	On-Station Procedures	Q/M	Q/M	Q/M	Q/M	Q/M
29	Air Refueling	Q/M(5)	Q/M(5)	Q/M(5)	Q/M(1)	Q/M(3)
30	In-Flight Checks	I, Q/M	I, Q/M	I, Q/M	Q/M	Q/M
31	GINS Operations				Q/M	
32	General Navigation	I, Q/M	I, Q/M	I, Q/M	Q/M	
33	Radio Navigation	I, Q/M	I, Q/M	I, Q/M	Q/M	
34	Weather Radar Operation				Q/M	
35	Mission Patterns				Q/M	
36	Descent/Penetration	I, Q/M	I, Q/M	I, Q/M	Q/M	Q/M
37	Unusual Attitudes	I(2)	I(2)	I(2)		
38	Holding	I	I	I		
39	Instrument Flight Rules (IFR) Traffic Pattern	I	I	I		

40	Non-Precision Approach	I	I	I		
41	Precision Approach	I	I	I		
42	Missed Approach	I, Q/M	I, Q/M	I, Q/M		
43	VFR Approach	Q/M(1)	Q/M(1)	Q/M(1)		
44	Simulated Engine(s) Out Pattern/Landing	Q/M(1)	Q/M(1)			
45	Simulated Engine(s) Out Go-Around	Q/M(1)	Q/M(1)			
46	Initial Buffet/Stick Shaker Recovery	Q/M(2)	Q/M(2)	Q/M(2)		
47	Landing	I, Q/M (1,4)	I, Q/M (1,4)	I, Q/M (1,4)		Q/M
48	After Landing	I, Q/M	I, Q/M	I, Q/M		Q/M
49	Automation Management	I, Q/M	I, Q/M	I, Q/M		
50	Pilot Monitoring Duties	I, Q/M	I, Q/M	I, Q/M		

Note:

1. Must be evaluated in flight for INIT evaluations (NAVs) or INIT/RQ evaluations (AC/FP/CP). **(T-2)**.

2. Must be evaluated in the SIM. **(T-2).**

3. May be evaluated in the OFT (INIT/RQ) or verbally (recurring) if live activity cancels. OFT or verbal evaluation must incorporate heavyweight Air-to-Air Refueling (AAR) procedures. **(T-2)**.

4. Landing may be evaluated on a touch-and-go.

5. Must be evaluated in flight except for periodic non-contact position CP evaluations. See **paragraph 5.2.1.3.2.2**. **(T-2)**.

Key:

I – Instructor examinee must accomplish all requirements identified as INSTM evaluations. **(T-2)**.

Q/M – Examinee must accomplish all requirements identified as QUAL/MSN evaluations. **(T-2)**.

Table 5.2. Flight Crew Evaluation Requirements [With-DMA].

AREA	DESCRIPTION	AC	FP	CP	FE
20	Takeoff and Landing Data (TOLD)	I, Q/M	I, Q/M	I, Q/M	Q/M
21	Weight and Balance	Q/M			Q/M

22	Flight Plan	Q/M	Q/M	Q/M	
23	Air Traffic Control (ATC)	I, Q/M	I, Q/M	I, Q/M	
24	Takeoff	I, Q/M(1)	I, Q/M(1)	I, Q/M(1)	Q/M
25	Departure/Climb-Out	I, Q/M	I, Q/M	I, Q/M	Q/M
26	Level-Off	I, Q/M	I, Q/M	I, Q/M	
27	Cruise/Navigation	I, Q/M	I, Q/M	I, Q/M	Q/M
28	On-Station Procedures	Q/M	Q/M	Q/M	Q/M
29	Air Refueling	Q/M(6)	Q/M(6)	Q/M(6)	Q/M(3)
30	In-Flight Checks	I, Q/M	I, Q/M	I, Q/M	Q/M
31	Flight Management System (FMS)	Q/M	Q/M	Q/M	
32	General Navigation	I, Q/M	I, Q/M	I, Q/M	
33	Radio Navigation	I, Q/M	I, Q/M	I, Q/M	
34	Weather Radar Operation	Q/M	Q/M	Q/M	
35	Mission Patterns	Q/M	Q/M	Q/M	
36	Descent/Penetration	I, Q/M	I, Q/M	I, Q/M	Q/M
37	Unusual Attitudes	I(2)	I(2)	I(2)	
38	Holding	I	I	I	
39	Instrument Flight Rules (IFR) Traffic Pattern	I	I	I	
40	Non-Precision Approach	I(5)	I(5)	I(5)	
41	Precision Approach	I(5)	I(5)	I(5)	
42	Missed Approach	I, Q/M	I, Q/M	I, Q/M	
43	VFR Approach	Q/M(1)	Q/M(1)	Q/M(1)	
44	Simulated Engine(s) Out Pattern/Landing	Q/M(1)	Q/M(1)		
45	Simulated Engine(s) Out Go-Around	Q/M(1)	Q/M(1)		
46	Initial Buffet/Stick Shaker Recovery	Q/M(2)	Q/M(2)	Q/M(2)	
47	Landing	I, Q/M (1,4)	I, Q/M (1,4)	I, Q/M (1,4)	Q/M
48	After Landing	I, Q/M	I, Q/M	I, Q/M	Q/M
49	Automation Management	I, Q/M	I, Q/M	I, Q/M	

50	Pilot Monitoring Duties	I, Q/M	I, Q/M	I, Q/M	

Note:

1. Must be evaluated in flight for INIT/RQ evaluations. **(T-2)**.

2. Must be evaluated in the SIM. **(T-2)**.

3. May be evaluated in the OFT (INIT/RQ) or verbally (recurring) if live activity cancels. OFT or verbal evaluation must incorporate heavyweight AAR procedures. **(T-2)**.

4. Landing may be evaluated on a touch-and-go.

5. RNAV must be flown during evaluation on either Precision or Non-Precision approach. **(T-2)**.

6. Must be evaluated in flight except for periodic non-contact position CP evaluations. See **paragraph 5.2.1.3.2.2**. **(T-2)**.

Key:

I – Instructor examinee must accomplish all requirements identified as INSTM evaluations. **(T-2)**.

Q/M – Examinee must accomplish all requirements identified as QUAL/MSN evaluations. **(T-2)**.

5.7. Flight Crew Grading Criteria.

5.7.1. Area 20 -- Takeoff and Landing Data (TOLD):

5.7.1.1. **Q** . Fully knowledgeable/completed takeoff and landing performance data. Ensured TOLD is computed within tolerances of column A, **Table 5.3**.

5.7.1.2. **Q** -. Computed required takeoff and landing data within tolerances of column B, **Table 5.3** Limited knowledge of takeoff and landing data.

5.7.1.3. **U** . Unable to complete/did not ensure takeoff and landing data card was completed. Computations exceeded column B, **Table 5.3** tolerances. Inadequate knowledge of performance data.

5.7.2. Area 21 -- Weight and Balance:

5.7.2.1. **Q** . Demonstrated knowledge of aircraft limitations and weight and balance. Completed DD Form 365-4 accurately and legibly. Errors in percent of mean aerodynamic chord (MAC) or gross weight did not exceed tolerances of column A, **Table 5.3**.

5.7.2.2. **Q** -. Demonstrated a limited knowledge of aircraft limitations and weight and balance. Completed a legible DD Form 365-4 with errors or omissions that did not affect safety. Errors in percent of MAC or gross weight did not exceed tolerances of column B, **Table 5.3**.

5.7.2.3. **U** . Unable to complete DD Form 365-4. Errors in percent of MAC or gross weight exceeded tolerances of column B, **Table 5.3** Displayed inadequate knowledge of weight and balance directives.

Table 5.3. Consolidated Performance Data Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Field Pressure Altitude	+/- 200 feet	+/- 500 feet
Outside Air Temperature	+/- 3 degrees	+/- 5 degrees
Power Setting (Exhaust Pressure Ratio (EPR)	+/- .01	+/- .02
Takeoff Stabilizer Setting (Units)	+/- .2	+/- .4
All Computed Speeds	+/- 2 knots	+/- 4 knots
All Computed Distances	+/- 400 feet	+/- 600 feet
All Computed Gross Weights	+/- 2000 lbs.	+/- 5000 lbs.
Takeoff/Landing Center of Gravity	+/- .5%	+/- 1.0%

5.7.3. Area 22 -- Flight Plan/Charts: [With-DMA, Charts are N/A]

5.7.3.1. **Q** . Selected current navigation charts of proper scale and type for the mission. Charts reflected special use airspace where required, orbit airspace, air refueling track, emergency and alternate airfields, high terrain or obstacle, and other data as required by mission directives for the planned route of flight. All coordinates were transcribed correctly. Completed Flight plan/charts did not exceed tolerances of column A, **Table 5.4**.

5.7.3.2. **Q** -. Flight plan/chart completed with minor errors or omissions that did not affect mission accomplishment. No more than one error made in transcribing coordinates. Route plotted with errors that exceeded column A tolerances, **Table 5.4** No more than four errors exceeded column A tolerances, **Table 5.4** and no error exceeded column B tolerances, **Table 5.4**.

5.7.3.3. **U** . Flight plan/chart was not completed, or contained major errors or omissions that jeopardized mission accomplishment. Failed to verify the CFP waypoints against current FLIP when using an expired navigation system database. Selected improper/obsolete charts. Route plotting errors exceeded column B tolerances, **Table 5.4** More than four errors exceeded column A tolerances, **Table 5.4**, or one or more errors exceeded column B tolerances, **Table 5.4**.

Table 5.4. Consolidated Flight Plan/Charts Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Heading	+/- 5 degrees	+/- 10 degrees
Time	+/- 2 minutes	+/- 4 minutes
Distance	5 (nautical mile)NM	10 NM
Note: 1. Errors that occur as a result of the previous error will not be considered when applying the limits of the grading criteria.		

2. Either computer or manual flight plan may be used.

5.7.4. Area 23 -- Air Traffic Control (ATC) Clearance:

5.7.4.1. **Q** . Promptly complied with all controlling agency instructions and made required reports.

5.7.4.2. **Q** -. Slow to comply with controlling agency instructions or unsure of reporting requirements.

5.7.4.3. **U** . Accepted clearance that could not be complied with or did not understand clearance. Did not comply with clearance or make required reports.

5.7.5. Area 24 -- Takeoff (May be evaluated on initial takeoff or subsequent touch-and-go takeoffs):

5.7.5.1. **Q** . Accomplished procedures and checklist as required by the flight manual and governing directives.

5.7.5.1.1. AC/FP/CP: Aircraft control was smooth throughout takeoff. Performed takeoff in accordance with flight manual procedures. Did not exceed column A tolerances, **Table 5.5**.

5.7.5.1.2. FE: Applied power smoothly. Continuously monitored aircraft/engine system to ensure compliance with all limitations.

5.7.5.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

5.7.5.2.1. AC/FP/CP: Aircraft Control was rough or erratic. Hesitant in application of procedures/corrections. Did not exceed column B tolerances, **Table 5.5**.

5.7.5.2.2. FE: Applied power in an acceptable manner. Deviations in monitoring of aircraft/engine systems did not exceed limitations.

5.7.5.3. **U** . Violated flight manual procedures or exceeded column B tolerances, **Table 5.5** Errors or omissions could have jeopardized mission accomplishment or flight safety.

5.7.5.3.1. AC/FP/CP: Liftoff was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Over controlled the aircraft.

5.7.5.3.2. FE: Applied power in an unacceptable manner. Did not monitor engine/system indicators. Failed to comply with AC's instructions.

Table 5.5. Takeoff Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Airspeed	+ 10/- 5 knots	+ 15/- 5 knots
Heading	+/- 5 degrees	+/- 10 degrees

5.7.6. Area 25 -- Departure/Climb:

5.7.6.1. **Q** . Performed departure as published/directed and complied with all instructions. Applied course/heading corrections promptly. Visually cleared the area and demonstrated appropriate procedural knowledge. Did not exceed column A tolerances, **Table 5.6**.

5.7.6.1.1. NAV: Monitored headings, altitudes, and aircraft position throughout departure. Used a Standard Instrument Departure (SID) (if applicable) and had local area chart of Operational Navigation Chart (ONC) or larger scale immediately available for reference (i.e., out on the table). Monitored terrain/obstacle clearance. Provided appropriate information in a timely manner. Monitored departure instructions to ensure ATC compliance.

5.7.6.1.2. FE: Monitored aircraft/engine systems to ensure compliance with limitations. Maintained charted climb power.

5.7.6.1.2.1. [With-DMA] FE: Monitored terrain/obstacle clearance. Monitored departure instructions to ensure ATC compliance.

5.7.6.2. **Q-** . Performed departure as published/directed and complied with all restrictions. Slow to apply course/heading corrections. Visually cleared the area, but slow in applying procedural knowledge. Did not exceed column B tolerances, **Table 5.6**.

5.7.6.2.1. NAV: Monitored headings, altitudes, position, and terrain clearance. Displayed difficulty in appropriate information. Performance did not degrade mission accomplishment or compromise flight safety. Monitored SID (if applicable) but did not have local area chart of ONC or larger scale immediately available for reference.

5.7.6.2.2. FE: Deviations in monitoring aircraft/engine systems; did not exceed limitations. Minor deviations in maintaining charted climb power.

5.7.6.2.2.1. [With-DMA] FE: Monitored terrain/obstacle clearance. Monitored departure instructions to ensure ATC compliance. Displayed difficulty in appropriate information. Performance did not degrade mission accomplishment or compromise flight safety.

5.7.6.3. **U** . Failed to comply with published/directed departure instructions or exceeded column B tolerances, **Table 5.6** Failed to visually clear the area. Lack of procedural knowledge resulted in a loss of situational awareness or jeopardized mission accomplishment.

5.7.6.3.1. NAV: Did not monitor headings, altitudes, or terrain clearance during the departure. Was not aware of aircraft position and was unable to provide updated information when required. Did not use a SID or local area chart of ONC or larger scale.

5.7.6.3.2. FE: Did not monitor aircraft/engine systems indicators; actions performed inadequately. Major deviations in maintaining charted climb power. Did not accomplish required checks and procedures.

5.7.6.3.2.1. [With-DMA] FE: Did not monitor terrain/obstacle clearance. Failed to monitor departure instructions to ensure ATC compliance. Could not reference appropriate information. Performance degraded mission accomplishment or compromised flight safety.

Table 5.6. Departure/Climb Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+/- 100 feet	+/- 200 feet
Airspeed	+/- 10 knots or +/- .04 Mach	+/- 15 knots or +/- .07 Mach
Course/Heading	+/- 5 degrees (1)	+/- 10 degrees (1)
Note: 1. When assigned or specified		

5.7.7. Area 26 -- Level Off:

5.7.7.1. **Q** . Leveled off smoothly at specified altitude. Established proper cruise airspeed promptly. Visually cleared the area. Did not exceed column A tolerances, **Table 5.7**.

5.7.7.2. **Q-** . Level off was slightly erratic. Some difficulty in maintaining proper altitude. Slow in establishing proper cruise airspeed. Visually cleared the area. Did not exceed column B tolerances, **Table 5.7**.

5.7.7.3. **U** . Level off was erratic. Delayed excessively or failed to establish proper cruise airspeed. Failed to clear the area. Exceed column B tolerances, **Table 5.7**.

Table 5.7. Level Off Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+/- 100 feet	+/- 200 feet
Course/Heading	+/- 5 degrees (1)	+/- 10 degrees (1)
Note: 1. When assigned or specified.		

5.7.8. Area 27 -- Cruise/Navigation:

5.7.8.1. **Q** . Displayed knowledge of Global Positioning System Integrated Navigation System (GINS) operations/procedures. Ensured navigational aids (NAVAIDS) were properly tuned, identified, and monitored (when available). Aware of exact position and speeds at all times. Visually cleared the area. Did not exceed column A tolerances, **Table 5.8**.

5.7.8.1.1. [With-DMA] AC/FP/CP: Cruise/On-Station speeds and altitudes used were accomplished effectively to support mission requirements.

5.7.8.1.2. NAV: Cruise/On-Station speeds and altitudes used were accomplished effectively to support mission requirements.

5.7.8.1.3. FE: Cruise/Orbit data and fuel endurance computations were accurate and updated at timely intervals.

5.7.8.2. **Q** -. Displayed knowledge of GINS operations/procedures with errors or omissions that did not jeopardize mission accomplishment. Some deviations in tuning,

identifying, and monitoring NAVAIDS. Had difficulty in establishing exact position and/or speed. Visually cleared the area. Did not exceed column B tolerances, **Table 5.8**.

5.7.8.2.1. [With-DMA] AC/FP/CP: Speeds and altitudes used were accomplished with minor errors that did not affect safety of flight or mission accomplishment.

5.7.8.2.2. NAV: Speeds and altitudes used were accomplished with minor errors that did not affect safety of flight or mission accomplishment.

5.7.8.2.3. FE: Cruise/Orbit data and fuel endurance computations reflected procedural/mathematical errors or omissions.

5.7.8.3. **U** . Displayed major errors in GINS operations/procedures that jeopardized mission accomplishment, or to the extent that position and/or speed were unreliable. Did not visually clear the area. Exceed column B tolerances, **Table 5.8**.

5.7.8.3.1. [With-DMA] AC/FP/CP: Improper speeds and/or altitudes used could have affected flight safety or jeopardized mission accomplishment.

5.7.8.3.2. NAV: Improper speeds and/or altitudes used could have affected flight safety or jeopardized mission accomplishment.

5.7.8.3.3. FE: Improper speeds and/or altitudes used could have affected flight safety or jeopardized mission accomplishment.

5.7.9. Area 28 -- On-Station Procedures:

5.7.9.1. **Q** . Maintained situational awareness of mission developments and requirements. Updated mission information as applicable for real time mission changes. Did not exceed applicable column A tolerances, **Table 5.8**.

5.7.9.1.1. [With-DMA] AC/FP/CP: Coordinated effectively with all required agencies. Effectively established aircraft in mission orbit in accordance with applicable directives. Performed on-station procedures in accordance with governing directives as soon as practical. Established a suitable orbit location within directed airspace.

5.7.9.1.2. NAV: Performed on-station procedures in accordance with governing directives as soon as practical. Established a suitable orbit location within directed airspace.

5.7.9.1.3. FE: In-flight data computations were accurate and accomplished in a timely manner. Data computations accomplished in accordance with applicable directives.

5.7.9.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge. Did not exceed applicable column B tolerances, **Table 5.8**.

5.7.9.2.1. [With-DMA] AC/FP/CP: Coordinated and established the aircraft in mission orbit in accordance with applicable directives with minor deviations. Performed limited on-station procedures or exhibited orbit positioning knowledge that did not jeopardize mission accomplishment.

5.7.9.2.2. NAV: Performed limited on-station procedures or exhibited orbit positioning knowledge that did not jeopardize mission accomplishment.

5.7.9.2.3. FE: Cruise/Orbit data and fuel endurance computations reflected procedural/mathematical errors or omissions.

5.7.9.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety. Exceeded column B tolerances, **Table 5.8**.

5.7.9.3.1. [With-DMA] AC/FP/CP: Failed to properly coordinate and establish a mission orbit in accordance with applicable directives. Improper speeds and/or altitudes used could have affected flight safety or jeopardized mission accomplishment.

5.7.9.3.2. NAV: Improper speeds and/or altitudes used could have affected flight safety or jeopardized mission accomplishment.

5.7.9.3.3. FE: Inadequate knowledge of procedures. Required checks/procedures were inadequate or not accomplished.

Table 5.8. Consolidated Cruise/Navigation/On-Station Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+/- 100 feet	+/- 200 feet
Airspeed	+/- 5% or 5 knots (1)	+/- 10% or 10 knots (1)
Course	+/- 5 NM	+/- 10 NM
Heading	+/- 5 degrees	+/- 10 degrees
Point-to-Point	+/- 2 miles	+/- 4 miles
Target ground speed	+/- 50 knots (2)	+/- 70 knots (2)
Note: 1. Whichever is greater (not below min maneuver speed). 2. Unless indicated airspeed (IAS) compromises flight safety.		

5.7.10. Area 29 -- Air Refueling:

5.7.10.1. **Q** . Demonstrated thorough knowledge of air refueling and rendezvous procedures were conducted in accordance with prescribed procedures.

5.7.10.1.1. AC/FP: Established and maintained proper refueling position. Aircraft control was smooth and stable. Correct application of emergency separation procedures. AC/FP air refueling requires 10 minutes in contact. One inadvertent disconnect is permitted. **Note:** Autopilot-on contact time may be reduced (after at least 5 continuous minutes) if the examinee demonstrates the ability to maintain a smooth, stable receiver platform. Time spent performing air refueling envelope demonstration counts towards the 5 minute minimum. Autopilot-off contact is required for all INIT and RQ evaluations.

5.7.10.1.1.1. [With-DMA] Air to air refueling rendezvous was conducted in accordance with prescribed procedures. Correctly computed expected turn range within +/- 2 NMs and offset within +/- 2 NMs.

5.7.10.1.2. IPs will demonstrate a stable air refueling envelope demonstration. IPs must safely maneuver the aircraft to and from the envelope limits in all three dimensions (fore/aft, up/down, left/right), not exceeding the tanker boom limits as defined in Allied Tactical Publication (ATP) 3.3.4.2, *Air-to-Air Refueling ATP-56*, U.S. Standards Related Document. **(T-2)**.

5.7.10.1.2.1. [With-DMA] Demonstrated air to air refueling rendezvous in accordance with prescribed procedures. Demonstrated computation of expected turn range within +/- 2 NMs and offset within +/- 2 NMs.

5.7.10.1.3. CP: Performance of duties during rendezvous and refueling operations will be evaluated. **(T-2)**. CPs must establish and maintain a stable pre-contact position (approximately 5 minutes). **(T-2)**. CPs who are qualified for air refueling (contact position) will be evaluated in accordance with **paragraph 5.7.10.1.1**. **(T-2)**.

5.7.10.1.4. NAV: Air to air refueling rendezvous was conducted in accordance with prescribed procedures and all checklists were accomplished with only minor discrepancies. Directed closure to within 1 NM of tanker. Correctly computed turn range within +/- 2 NMs and offset within +/- 2 NMs.

5.7.10.1.5. FE: Knowledgeable of air refueling operations. Managed and on loaded fuel in accordance with applicable flight manuals and directives.

5.7.10.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

5.7.10.2.1. AC/FP: Demonstrated limited ability to establish and maintain the proper air refueling contact position. Not more than three inadvertent disconnects. Took excessive time to stabilize in the contact position.

5.7.10.2.1.1. [With-DMA] Displayed lack of knowledge of rendezvous procedures. Computed expected turn range greater than +/- 2 NMs, but less than +/- 5 NMs, and offset greater than +/- 2 NMs, but less than +/- 5 NMs.

5.7.10.2.2. CP: Demonstrated limited ability to establish and maintain a stable pre-contact position.

5.7.10.2.3. FE: Limited knowledge of air refueling operations. Managed and on-loaded fuel in accordance with applicable flight manuals and directives with minor errors or omissions, which did not affect mission accomplishment.

5.7.10.2.4. NAV: Displayed lack of knowledge with the checklists or rendezvous procedures. Computed turn range greater than +/- 2 NMs, but less than +/- 5 NMs, and offset greater than +/- 2 NMs, but less than +/- 5 NMs.

5.7.10.3. **U** . Performance exceeded "Q-" grading criteria. Demonstrated the inability to establish and maintain the contact position. Aircraft control could have jeopardized mission accomplishment or flight safety. Errors or omissions could have jeopardized mission accomplishment or flight safety. Computations exceeded "Q-" standards.

5.7.11. Area 30 -- In-Flight Checks:

5.7.11.1. **Q** . Accomplished in-flight checks as required by the flight manual and governing directives. Ensured all systems were properly operated/monitored.

5.7.11.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

5.7.11.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety.

5.7.12. Area 31 -- GINS Operations [With-DMA, Flight Management System]:

5.7.12.1. **Q** . Demonstrated satisfactory knowledge and understanding of GINS [With-DMA, FMS] components/In-Flight Alignment (IFA) sequencing. Effectively used GINS [With-DMA, FMS] navigational information in a precise and accurate manner. Recognized malfunctions and took appropriate corrective actions. Accomplished initialization and IFA sequencing in accordance with applicable directives in time to support the mission. Recognized/performed needed manual position updates. Monitored GINS [With-DMA, FMS] aiding/position to ensure accurate positional and associated information transmitted to mission equipment.

5.7.12.2. **Q** -. Displayed limited understanding of GINS [With-DMA, FMS] components, IFA sequencing, malfunctions and/or appropriate corrective action; no further system degradation resulted from corrective action taken. Knowledge of GINS [With-DMA, FMS] components was adequate, but degraded full, effective use of GINS [With-DMA, FMS] navigational information. Crosscheck of one or more navigational information (position, true heading (TH), groundspeed (GS), or cross track deviation (XTK)/track angle error (TKE)) omitted prior to using the Inertial Navigation Unit (INU) aligned in flight.

5.7.12.3. **U** . Failed to recognize malfunctions and/or take appropriate corrective action, which resulted in system degradation. Inadequate knowledge of GINS [With-DMA, FMS] components seriously degraded effective use of GINS [With-DMA, FMS] navigational information. Corrective action taken was inappropriate and further degraded GINS [With-DMA, FMS] operation. Failure to update or correctly interpret GINS [With-DMA, FMS] data resulted in excessive position errors. Induced a position error that resulted in degraded positional accuracy or IFA failure. Failed to crosscheck navigational information (position, TH, GS, and XTK/TKE) prior to using INU aligned in flight, or failed to crosscheck one or more navigational information (position, TH, GS, or XTK/TKE) before attempting to couple the autopilot to the INU aligned in flight.

5.7.13. Area 32 -- General Navigation:

5.7.13.1. **Q** . At no time allowed the airplane to deviate more than 5 NM from the planned/re-planned course or to deviate outside the refueling track or ATC assigned/protected lateral airspace. Active flight plan waypoints were kept updated and no unscheduled turns caused by erroneous data.

5.7.13.2. **Q** -. At no time allowed the airplane to deviate more than 10 NM from the planned/re-planned course. Active flight plan waypoints were updated and no more than one unscheduled turn was caused by erroneous data.

5.7.13.3. **U** . Allowed airplane to deviate from planned/re-planned course beyond acceptable measures of distance and/or time. Allowed airplane to deviate outside of the refueling track or ATC assigned/protected lateral airspace.

5.7.14. Area 33 -- Radio Navigation:

5.7.14.1. **Q** . Properly used radio aids to determine aircraft position. Verified charted location of stations used in plotting aircraft position.

5.7.14.2. **Q** -. Committed errors in the use of radio aids that did not adversely affect determining aircraft position. Made minor errors in verifying charted location of stations used in plotting aircraft position.

5.7.14.3. **U** . Unsatisfactory techniques or procedures in and using radio aids to determine aircraft position. Failed to verify charted location of stations used to plot aircraft position.

5.7.15. Area 34 -- Weather Radar Operation:

5.7.15.1. **Q** . Demonstrated satisfactory knowledge and understanding of radar equipment. Effectively used radar to avoid weather and to support air refueling operations and traffic avoidance. Satisfactory demonstration/knowledge of thunderstorm avoidance.

5.7.15.2. **Q** -. Inefficient radar operation detracted from weather avoidance, traffic avoidance, or air refueling operations; however, no impact on mission accomplishment and flight safety was not jeopardized.

5.7.15.3. **U** . Ineffective radar operation significantly hindered weather avoidance, traffic avoidance, and/or air refueling operations; flight safety was jeopardized or air refueling operations were significantly delayed.

5.7.16. Area 35 -- Mission Patterns:

5.7.16.1. **Q** . Demonstrated satisfactory accomplishment or knowledge of alternate (waypoint only) and GINS [With-DMA, FMS] orbit procedures. Selected and engaged proper steering pattern and lobe, and monitored orbit capture. Briefed pilot on anticipated aircraft maneuvers [With-DMA, N/A] and notified Mission Crew Commander (MCC) prior to orbit capture.

5.7.16.2. **Q** -. Made errors in selecting and engaging pattern steering or waypoint-only orbit, resulting in considerable delay when entering orbit and/or excessive maneuvering to capture the pattern.

5.7.16.3. **U** . Selected/engaged incorrect pattern or waypoint-only orbit resulted in departing protected airspace. Insufficient knowledge or unsatisfactory accomplishment of alternate orbit procedures resulted in degraded mission radar operation. Failed to brief pilot when engaging pattern steering and/or notify MCC prior to orbit entry. [With-DMA, Pilot notifies MCC prior to orbit entry.]

5.7.17. Area 36 -- Descent/Penetration:

5.7.17.1. **Q** . Accomplished procedures and checklist as required by the flight manual and governing directives. Effectively utilized appropriate FLIP.

5.7.17.1.1. NAV: Computed minimum groundspeed within +/- 4 knots and notified pilots prior to approach. Notified pilots of deviations in heading and altitude. Monitored and complied with all weather restrictions. Monitored applicable arrival or approach procedures.

5.7.17.1.2. [With-DMA] FE: Monitored applicable arrival or approach procedures.

5.7.17.2. **Q** -. Performance included errors, omissions, or delays that did not jeopardize mission accomplishment or safety. Demonstrated limited knowledge.

5.7.17.2.1. NAV: Provided incorrect (greater than +/- 4 knots, but less than +/- 8 knots) minimum groundspeed. Missed minor heading and altitude deviations. Missed minor arrival or approach procedure instructions that did not jeopardize flight safety.

5.7.17.3. **U** . Errors or omissions could have jeopardized mission accomplishment or flight safety. Exceeded "Q-" grading criteria.

5.7.18. Area 37 -- Unusual Attitudes (SIM Only):

5.7.18.1. **Q** . Recovery to level flight was smooth and positive. Used correct recovery procedures.

5.7.18.2. **Q** -. Slow to analyze attitude or erratic in recovery to level flight. Used correct recovery procedures.

5.7.18.3. **U** . Unable to determine attitude or used improper recovery procedures.

5.7.19. Area 38 -- Holding:

5.7.19.1. **Q** . Entry and holding procedures in accordance with AFI 11-202V3, *General Flight Rules*, and applicable directives; remained within airspace. Did not exceed column A tolerances, **Table 5.9**.

5.7.19.2. **Q** -. Improper entry and holding procedures but remained within airspace limits. Exceeded column A tolerances, **Table 5.9**.

5.7.19.3. **U** . Exceeded airspace or column B tolerances, **Table 5.9**.

Table 5.9. Holding Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+/- 100 feet	+/- 200 feet
Airspeed	Airspeed +/- 10 knots	Airspeed +/- 15 knots
Leg Timing	+/- 15 seconds or TACAN +/- 2NM	+/- 20 seconds or TACAN +/- 3NM

5.7.20. Area 39 -- Instrument Flight Rules (IFR) Traffic Pattern (Prior to Final Approach Fix (FAF)):

5.7.20.1. **Q** . Procedures and checklist items required by the flight manual and applicable directives were accomplished. Followed controller instructions and complied with all restrictions. Made smooth and timely corrections.

5.7.20.2. **Q** -. Procedures and checklist items required by the flight manual and applicable directives were accomplished with errors or omissions that did not jeopardize mission accomplishment. Slow or hesitant to follow controller's instructions. Over-controlled slightly or occasionally slow in making corrections. Exceeded column A tolerances, **Table 5.10**.

5.7.20.3. **U** . Procedures and checklist items required by the flight manual and applicable directives were accomplished with errors or omissions that jeopardized mission accomplishment. Failed to comply with controller's instructions. Exceeded column B tolerances, **Table 5.10**.

Table 5.10. IFR Traffic Pattern Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+/- 100 feet.	+/- 200 feet
Airspeed	+10/- 5 knots	+20/- 5 knots
Course/Heading	+/- 10 degrees	+/- 15 degrees
TACAN Arc	+/- 2 miles	+/- 3 miles

5.7.21. Area 40 -- Non-Precision Approach (FAF/Descent Point to Missed Approach Point):

5.7.21.1. **Q** . Performed procedures as published/directed and in accordance with the flight manual. Made smooth and timely corrections. Position would have permitted safe landing. Computed/adjusted timing to determine missed approach point (when applicable). Did not exceed column A tolerances, **Table 5.11**.

5.7.21.2. **Q** -. Performed procedures with deviations that did not jeopardize mission accomplishment or compromise safety. Slow to make corrections. Position would have permitted safe landing. Computed/adjusted timing to determine missed approach point (when applicable). Exceeded column A tolerances, **Table 5.11**.

5.7.21.3. **U** . Performed procedures with major deviations. Erratic corrections. Position would not have permitted safe landing. Failed to compute or adjust timing to determine missed approach point. Exceeded column B tolerances, **Table 5.11**.

Table 5.11. Non-Precision Approach Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+ 100/- 0 feet (1)	+ 100/- 50 feet (2)
Airspeed	+ 10/- 5 knots	+ 15/- 5 knots
Course/Heading	+/- 5 degrees (3)	+/- 10 degrees (4)
Note: 1. After reaching Minimum Descent Altitude (MDA) and prior to the Visual Descent Point (VDP) or missed approach point (MAP). 2. After reaching MDA and prior to missed approach point. 3. Or less than half scale course deviation indicator (CDI) deflection. 4. Or less than full-scale CDI deflection.		

5.7.22. Area 41 -- Precision Approach (Glide Slope to Decision Height):

5.7.22.1. **Q** . Performed procedures as directed and in accordance with the flight manual. Smooth and timely response to controller's instructions. Established initial glide path and adjusted for deviations throughout the approach and glide slope. Complied with decision height. Position would have permitted a safe landing. Did not exceed column A tolerances, **Table 5.12**.

5.7.22.2. **Q** -. Performed procedures with some deviations. Slow to respond to controller instructions. Slow to establish initial glide path and adjust for deviations throughout the approach. Complied with decision height. Position would have permitted a safe landing. Exceeded column A tolerances, **Table 5.12**.

5.7.22.3. **U** . Performed procedures with major deviations. Erratic corrections. Did not comply with decision height and/or position would not have permitted a safe landing. Exceeded column B tolerances, **Table 5.12**.

Table 5.12. Precision Approach Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Airspeed	+10/-5 knots	+15/-5 knots
Heading	Within 5 degrees of controller's instructions	Within l0 degrees of controller's instructions
Glide Slope Deviation	Within 1 dot	Within 2 dots above and 1 dot below
Course Deviation	Within 1 dot	Within 2 dots

5.7.23. Area 42 -- Missed Approach:

5.7.23.1. **Q** . Executed missed approach as published/directed. Completed all procedures in accordance with the flight manual. Did not exceed column A tolerances, **Table 5.13**.

5.7.23.2. **Q** -. Executed missed approach with deviations that did not jeopardize mission accomplishment or compromise safety. Slow to comply with published procedures, controller instructions or flight manual procedures. Exceeded column A tolerances, **Table 5.13**.

5.7.23.3. **U** . Executed missed approach with major deviations that jeopardized mission accomplishment or compromised safety. Failed to comply with published procedure, controller's instructions, or flight manual procedures. Exceeded column B tolerances, **Table 5.13**.

Table 5.13. Missed Approach Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Level Off Altitude	+/- 100 feet	+/- 200 feet
Airspeed	+ 15/- 5 knots	+ 20/- 5 knots
Course/Heading	+/- 5 degrees	+/- 10 degrees

TACAN Arc	+/- 2 miles	+/- 3 miles

5.7.24. Area 43 -- Visual Flight Rules (VFR) Approach (Weather & traffic permitting, includes Base to Final, VFR Traffic Pattern or Visual Approach. Evaluate by alternative means on re-occurring evaluations if not observed):

5.7.24.1. **Q** . Performed the traffic pattern, turn, and/or visual approach in accordance with procedures outlined in the flight manual and local directives. Established initial glide path and adjusted for deviations throughout the approach and glide path. Maintained centerline control and adjusted for deviations throughout the approach. Complied with appropriate altitude restrictions. Position would have permitted a safe landing. Aircraft control was smooth and positive. Constantly cleared area of intended flight. Did not over/undershoot final approach. Did not exceed column A tolerances, **Table 5.14**.

5.7.24.2. **Q** -. Performed the traffic pattern, turn, and/or visual approach with some deviations from procedures outlined in the flight manual and local directives. Slow to establish initial glide path and adjust for deviations throughout the approach. Slow to correct deviations in centerline control throughout the approach. Complied with appropriate altitude restrictions. Position would have permitted a safe landing. Aircraft control was not consistently smooth and positive, but safe. Adequately cleared area of intended flight. Over/undershot final approach slightly. Exceeded column A tolerances, **Table 5.14**.

5.7.24.3. **U** . Performed procedures with major deviations. Erratic corrections and/or aircraft control. Did not comply with appropriate altitude restrictions and/or position would not have permitted a safe landing. Turn to final and/or final approach not performed in accordance with procedures outlined in the flight manual and local directives. Over/undershot final approach by a wide margin. Exceeded column B tolerances, **Table 5.14**.

Table 5.14. VFR Approach Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Altitude	+/- 100 feet	+/- 200 feet
Airspeed	+ 10/- 5 knots	+ 15/- 5 knots
Final Approach	+/- l mile of recommended length or as appropriate	+/- 1 mile of recommended length or as appropriate

5.7.25. Area 44 -- Simulated Engine(s) Out Pattern/Landing:

5.7.25.1. **Q** . Performed pre-landing checks, traffic pattern, approach/landing in accordance with procedures outlined in the flight manual, checklist, and other directives. Aircraft control was positive and smooth. Touched down within desired area. Did not exceed column A tolerances, **Table 5.15**.

5.7.25.2. **Q** -. Procedural errors were made during pre-landing checks, traffic pattern, approach/landing which did not affect safety. Landed left or right of centerline. Touchdown was within desired area. Exceeded column A tolerances, **Table 5.15**.

5.7.25.3. **U** . Pattern poorly flown. Failed to recognize and apply corrections to avoid over/undershoots. Did not comply with procedures outlined in the flight manual, checklist, and other directives. Exceeded column B tolerances, **Table 5.15**.

Table 5.15. Simulated Engine(s) Out Pattern/Landing Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Pattern Altitude	+/- 100 feet	+/- 200 feet
Airspeed	- 5/+ 15 knots	- 5/+ 20 knots

5.7.26. Area 45 -- Simulated Engine(s) Out Go-Around:

5.7.26.1. **Q** . Initiated and performed go-around promptly in accordance with the flight manual. Acquired and maintained a positive climb. Did not exceed column A tolerances, **Table 5.16**.

5.7.26.2. **Q** -. Slow or hesitant to initiate go-around. Procedural errors did not affect safety. Acquired and maintained a positive climb. Exceeded column A tolerances, **Table 5.16**.

5.7.26.3. **U** . Did not initiate go-around procedures when appropriate or directed. Applied unsafe or incorrect procedures. Exceeded column B tolerances, **Table 5.16**.

Table 5.16. Simulated Engine(s)-Out Go-Around Tolerances.

ITEM	COLUMN A (Q)	COLUMN B (Q-)
Climb Airspeed	+ 15/- 5 knots	+ 20/- 5 knots
Course/Heading	+/- 10 degrees	+/- 15 degrees

5.7.27. Area 46 -- Initial Buffet/Stick Shaker Recovery (SIM Only). At least one of the following three profiles must be used to evaluate Area 46: Orbit, Traffic Pattern Maneuvering, or Final Approach. **(T-2)**.

5.7.27.1. **Q** . Timely and accurate recognition of initial buffet. Recovery was smooth and positive. Applied correct recovery procedures.

5.7.27.2. **Q-** . Slow to recognize initial buffet. Recovery was not always smooth and positive. Applied correct recovery procedures.

5.7.27.3. **U** . Failed to recognize initial buffet. Aircraft progressed to stalled condition before recovery was initiated. Recovery was erratic or jeopardized safety of flight. Applied improper recovery procedures.

5.7.28. Area 47 -- Landing (Normal):

5.7.28.1. **Q** . Performed landing in accordance with procedures outlined in the flight manual and local directives.

5.7.28.1.1. AC/FP/CP. Touchdown was within desired area, on centerline. Ensured adequate runway length to permit a safe stop. Smooth, positive aircraft control throughout touch-and-go.

5.7.28.2. **Q** -. Performed landing with deviations to procedures outlined in the flight manual and local directives.

5.7.28.2.1. AC/FP/CP: Touchdown was within desired area. Did not land on centerline.

5.7.28.3. **U** . Landing/touch-and-go was not in accordance with flight manual procedures, operational restrictions, or local directives.

5.7.28.3.1. AC/FP/CP: Failed to ensure adequate runway length. Did not correct to centerline. Potentially dangerous.

5.7.29. Area 48 -- After Landing:

5.7.29.1. **Q** . Accomplished after landing checks and aircraft taxi procedures in accordance with the flight manual and applicable directives. Recorded all data accurately as required.

5.7.29.2. **Q** -. Accomplished after landing checks and aircraft taxi procedures with errors or omissions that did not jeopardize safety.

5.7.29.3. **U** . Accomplished after landing checks and aircraft taxi procedures with errors or omissions that jeopardized safety. Recorded data inaccurately or failed to record data.

5.7.30. Area 49 -- Automation Management.

5.7.30.1. Q. Established/followed guidelines for the operation of automated systems; aware of when systems should be disabled, and when programming actions are to be verbalized and acknowledged. Established/followed PF and PM responsibilities with regard to automated systems. Periodically reviewed and verified the status of aircraft automated systems. Verbalized and acknowledged entries and changes to automated systems parameters. Allowed sufficient time for programming the Mission Computer. Used automated systems at appropriate levels to reduce workload, but reduced or disengaged level of automation when programming demands could have reduced situational awareness or created work overloads.

5.7.30.2. Q- Had limited knowledge of guidelines for the operation of automated systems; unclear as to when systems should be disabled, or when programming actions are to be verbalized and acknowledged. Slow to establish/follow PF and PM responsibilities with regard to automated systems. Slow to review and verify the status of aircraft automated systems. Inconsistently verbalized and acknowledged entries and changes to automated systems parameters. Did not always allow sufficient time for programming the Mission Computer. Inconsistently used automated systems at appropriate levels.

5.7.30.3. U Did not establish/follow guidelines for the operation of automated systems; unaware of when systems should be disabled, or programming actions that are to be verbalized and acknowledged. Did not establish/follow PF and PM responsibilities with regard to automated systems. Did not periodically review and verify the status of aircraft automated systems. Did not verbalize and acknowledge entries and changes to automated systems parameters. Failed to allow sufficient time for programming the Mission Computer. Did not use automated systems at appropriate levels, to decrease workload. Did not reduce or disengage level of automation when programming demands reduced situational awareness or created work overloads.

5.7.31. Area 50 – Pilot Monitoring Duties.

5.7.31.1. Q. Effectively monitored and supported/advised the PF, intervening, when appropriate, if the PF was not adequately controlling the aircraft flight path. Complied with applicable flight policies and procedures and made required flight callouts. Remained vigilant to identify, communicate, and mitigate events/distractions that may adversely affect flight path management. Monitored energy and flight path performance and was alert for erroneous/conflicting aircraft control and navigational information. Effectively addresses aircraft system failures or unexpected aircraft flight guidance and aircraft system outcomes.

5.7.31.2. Q- Did not fully support/advise the PF regarding the aircraft flight path. Slow to intervene if the PF is not adequately controlling the aircraft flight path. Flight policies/procedures are not fully applied and required flight callouts are inconsistent. Flight path/energy management awareness, communication, and/or vigilance is sporadic but does not adversely affect flight safety. Intermittently addresses aircraft system failures or unexpected aircraft flight guidance and aircraft system outcomes.

5.7.31.3. U Failed to support/advise the PF regarding the aircraft flight path. Does not intervene if the PF is not adequately controlling the aircraft flight path. Application of flight policies/ procedures is insufficient and required callouts are not made. Flight path/energy management awareness, communication, and/or vigilance is insufficient or jeopardizes flight safety. Fails to address aircraft system failures or unexpected aircraft flight guidance and aircraft system outcomes.

Chapter 6

MISSION CREW EVALUATIONS

6.1. General. This chapter contains the task-oriented criteria for all Mission Crew evaluations in accordance with AFI 11-202V2 and AFI 11-401. Evaluation requirements are outlined in matrices for MCC, SD, AWO, ASO, Electronic Combat Officer (ECO), SST, AST, Air Battle Manager (ABM), and Mission Systems Operator (MSO).

6.2. Qualification Evaluation Objectives. The examinee must demonstrate the ability to accomplish all required duties safely and effectively, using appropriate flight manuals, directives, and operating procedures. **(T-2)**. Qualification evaluations will encompass all areas identified in **Table 3.1** and **Table 6.1** or **Table 6.2**. **(T-2)**. The examinee must demonstrate a degree of knowledge and proficiency essential for successful mission accomplishment and safety of flight. **(T-2)**. Qualification evaluations will be conducted on a live E-3 sortie. **(T-2)**. In the event of loss of planned fighter activity following mission planning, control events and supervision may be conducted using virtual assets via Distributed Mission Operations (DMO) or live assets via the Mission Simulator Live Intercept Training Environment (MSLITE). Specific profiles will be in accordance with locally developed profile guides.

6.2.1. If the examinee accomplishes all areas required for both the QUAL and MSN evaluation during the flight, the evaluation will be annotated as a QUAL/MSN evaluation. **(T-2)**. Due to the QUAL evaluation criteria, this will require a live E-3 Sortie. **(T-3)**. The evaluation will include assessing the examinee's ability to successfully accomplish appropriate areas. **(T-2)**.

6.2.1.1. [Crew +]: To enable the “Crew +” concept, the evaluation requirements tables have been modified to provide flexibility for SQ/CCs to approve mission crew members to be evaluated in additional grading areas from previously qualified positions, in accordance with AFMAN 11-2E-3V1. Examinees will complete the QUAL/MSN evaluation in their highest qualification on the aircraft. **(T-2)**. Any additional grading areas can be subsequently evaluated in DMO/MSLITE by any evaluator qualified to evaluate those areas. For example, an ECO that will be qualified to control aircraft will complete a QUAL/MSN as an ECO, but if unable to be evaluated in Areas 28, 29, and 30 in flight, those areas may be completed in the DMO/MSLITE by any evaluator qualified to evaluate those areas.

6.2.1.2. Examinees’ AF Form 8 will reflect mission crewmembers’ ability to perform additional duties/tasks and will outline restrictions on instruction/evaluation as applicable. **(T-2)**.

6.2.2. Mission Crew Commander (MCC).

6.2.2.1. MCC qualification evaluations will be conducted while the examinee actively supervises, at a minimum, a surveillance team and technicians, but can include a weapons team and/or an ECO. **(T-3)**. Additionally, the examinee must demonstrate the ability to accomplish all required duties safely and effectively, using appropriate flight manuals, directives, and operating procedures. **(T-2)**. QUAL evaluations will encompass all areas identified in **Table 6.1**. **(T-2)**. The examinee must demonstrate a degree of knowledge and proficiency essential for successful mission accomplishment and safety of flight.

6.2.2.2. [Crew +] An MCC may elect, with SQ/CC's concurrence, to conduct an expanded evaluation to enable duty execution in additional crew duties in accordance with "Crew +" concept, see **paragraph 6.2.1.1** Evaluation criteria for these evaluations are located on **Table 6.1** The flight examiner will annotate these evaluations on the AF Form 8 with remarks reflecting any necessary permissions/restrictions. **(T-2)**.

6.2.3. Weapons.

6.2.3.1. Senior Director (SD).

6.2.3.1.1. SD QUAL evaluations will be conducted while the examinee actively supervises a weapons team. **(T-2)**. Flight Phase areas may be evaluated in the Mission Crew SIM or Mission Crew Training System in accordance with AFI 11-202V2 except for Area 20, Outbound/Inbound Procedures.

6.2.3.1.2. SD that was previously qualified as IAWO may continue to perform IAWO duties under the following conditions:

6.2.3.1.2.1. The SD must perform IAWO duties on the SD INIT QUAL evaluation and subsequent evaluations in accordance with **paragraph 4.2**. **(T-2)**.

6.2.3.1.2.2. Crew Position on the AF Form 8 will be annotated as ISD and must include the restriction that reads as follows, "Examinee may only instruct AWO crewmembers". **(T-2)**. Once an ISD with restrictions completes an INIT/INSTR evaluation in their new crew position, the following statement "This evaluation removes previous restrictions" will be included. **(T-2)**.

6.2.3.1.2.3. Training certification forms must include a restriction allowing the SD to instruct AWO crewmembers only. **(T-2)**.

6.2.3.2. Air Weapons Officer (AWO).

6.2.3.2.1. AWO QUAL evaluations will be conducted on live E-3 sorties. **(T-3)**. Evaluation will include an assessment of the examinee's ability to successfully accomplish appropriate areas identified in **Table 6.1**. **(T-2)**. Flight Phase areas may be evaluated in the Mission Crew SIM or Mission Crew Training System in accordance with AFI 11-202V2 except for Area 20, Outbound/Inbound procedures.

6.2.4. Surveillance.

6.2.4.1. Air Surveillance Officer (ASO).

6.2.4.1.1. ASO evaluations will be conducted while the examinee actively supervises a surveillance team conducting surveillance activities. **(T-2)**.

6.2.4.1.2. [Crew +] An ASO may elect, with SQ/CC concurrence, to be evaluated in Area 28, Airspace Coordination, and Area 29, Control, in accordance with "Crew +" concept; see **paragraph 6.2.1.1** An ASO evaluated in these areas is qualified to control live aircraft. These evaluations will be annotated on the AF Form 8 with remarks reflecting any necessary permissions/restrictions. **(T-2)**.

6.2.4.2. Senior Surveillance Technician (SST).

6.2.4.2.1. SST evaluations will be conducted while the examinee actively assists the ASO in supervising a surveillance team conducting surveillance activities. **(T-2)**.

6.2.4.2.2. SST evaluations which includes demonstration of competence as an AST qualifies the SST to perform duties as an AST.

6.2.4.2.3. SST that was previously qualified as IAST may perform IAST duties under the following conditions:

6.2.4.2.3.1. SST must perform IAST duties on the SST INIT QUAL evaluation and subsequent SST evaluations in accordance with **paragraph 4.2**. **(T-2)**.

6.2.4.2.3.2. Crew Position on the AF Form 8 will be annotated as ISST and must include the restriction that reads as follows; "Examinee may only instruct AST crewmembers." **(T-2)**. Once an ISST with restrictions completes an INIT/INSTR evaluation in their new position, the following statement "This evaluation removes previous restrictions" will be included. **(T-2)**.

6.2.4.2.3.3. Training certification forms must include a restriction allowing the SST to instruct AST crewmembers only. **(T-2)**.

6.2.4.2.4. An SST who has been trained in the execution of Area 24, Air Refueling Procedures, and Area 31, Sensor Operations, may be evaluated in these areas. An SST successfully completing an evaluation in these areas will be qualified to conduct ASO duties. The flight examiner will annotate these evaluations on the AF Form 8 with remarks reflecting any necessary permissions/restrictions. **(T-2)**.

6.2.4.3. Air Surveillance Technician (AST).

6.2.4.3.1. AST evaluations will be conducted while the examinee actively participates in a surveillance team conducting surveillance activities. **(T-2)**.

6.2.5. Electronic Combat Officer (ECO).

6.2.5.1. ECO evaluations will be conducted while the examinee actively manipulates the Electronic Support Measures (ESM) to meet specific mission taskings. **(T-2)**.

6.2.5.2. [Crew +] An ECO may elect, with SQ/CC concurrence, to be evaluated in Area 28, Airspace Coordination, and Area 29, Control, in accordance with "Crew +" concept; see **paragraph 6.2.1.1** An ECO evaluated in these areas is qualified to control live aircraft. The flight examiner will annotate these evaluations on the AF Form 8 with remarks reflecting any necessary permissions/restrictions. **(T-2)**.

6.2.6. Air Battle Manager (ABM)/ Mission System Operator (MSO). These sections contain task-oriented criteria for ABM and MSO evaluations in accordance with AFI 11-202V2 and AFI 11-401. Evaluation requirements are outlined in **Table 6.2**.

6.3. Mission Evaluation Objectives. The examinee must demonstrate the ability to accomplish all required duties safely and effectively, using appropriate flight manuals, directives, and operating procedures to ensure successful employment and mission accomplishment. **(T-2)**. Mission evaluations will encompass all areas identified in **Table 3.1** and **Table 6.1** or **Table 6.2**. **(T-2)**. Mission evaluations will be conducted on a live E-3 sortie whenever possible. **(T-2)**. If unable to accomplish the mission evaluation on a live sortie, it may be accomplished in the SIM.

6.3.1. If the examinee accomplishes all areas required for both the QUAL and MSN evaluation during the flight, the evaluation will be annotated as a QUAL/MSN evaluation. **(T-2)**.

6.3.2. MCC. Activity must demonstrate prosecution of the air battle through the execution of applicable operational and/or tactical documents (operations orders (OPORDs)), operations plans (OPLANs), special instructions (SPINS), air operations directive (AOD), or OPTASKLINK, etc.) in accordance with applicable directives effectively managing the mission/battle through fighter flow, tanker management, communications, and production of a recognizable air picture. **(T-2)**.

6.3.3. SD examinee will actively supervise a weapons team conducting weapons control activity during a tactical or air sovereignty scenario. **(T-2)**. Activity must demonstrate prosecution of the air battle through the execution of applicable operational and/or tactical documents (OPORDS, AOD, OPLANS, SPINS, or OPTASKLINK, etc.) in accordance with applicable directives effectively managing the mission/battle through fighter flow, tanker management, communications (external agency coordination and control), and applicable data link coordination. **(T-2)**.

6.3.4. AWO examinee will conduct weapons activity utilizing a full combat scenario. **(T-2)**. Evaluation profile sorties will be defined by the unit and will include mission characteristics defined in **paragraph 2.4.1**. **(T-2)**.

6.3.5. ECO. Activity must demonstrate prosecution of either air, ground, and/or surface battle through the execution of applicable operational and/or tactical documents (OPORDS, AOD, OPLANS, SPINS, or OPTASKLINK, etc.) in accordance with applicable directives with sufficiency to effectively manage the mission. **(T-2)**.

6.3.6. ABM examinee will:

6.3.6.1. Conduct weapons activity as an Air-to-Air, Planned Air-to-Ground/-Surface, Dynamic Air-to-Ground/-Surface, or ES controller, as determined by the examiner. **(T-3)**. Evaluation sortie profiles will be defined by the unit and will include mission characteristics defined in **paragraph 2.4**. **(T-3)**.

6.3.6.2. Perform duties of the position of their highest qualification/certification while conducting control activity during a tactical or air sovereignty scenario. **(T-2)**. Activity must demonstrate prosecution of the air battle through completion of tasks including, but not limited to, the execution of operations orders (OPORDs)/operations plans (OPLANs)/Special Instructions (SPINs) in accordance with applicable directives effectively managing the mission/battle through fighter flow, tanker management, communications (external agency coordination and control), ESM systems, and/or applicable data-link coordination. **(T-2)**.

6.3.7. MSO examinee will act as a Battle Management Area (BMA) assist supporting an Air-to-Air, Planned Air-to-Ground/-Surface, Dynamic Air-to-Ground/-Surface controller, or ESM mission profile as determined by the examiner in accordance with **paragraph 2.4**. **(T-3)**.

6.3.8. If an instructor examinee instructs during a mission evaluation, the examinee still has the requirement to perform primary duties during that mission evaluation. **(T-2)**.

6.4. Criteria. All areas in this section will be graded using the grading policy in AFI 11-202V2 and any criteria listed within the individual areas. **(T-2)**.

Table 6.1. MCC, Weapons, Surveillance, ECO QUAL and MSN Evaluation Requirements.

AREA	DESCRIPTION	MCC	SD	AWO	ASO	SST	AST	ECO
20	Outbound/Inbound Procedures	Q	Q	Q	Q	Q	Q	Q
21	Assuming Station Responsibilities	Q, M	Q, M	M	Q, M	Q, M	Q, M	Q, M
22	AWACS Monitor Procedures	Q	Q	Q	Q	Q	Q	Q
23	Console Operations and Displays	Q, M	Q, M	Q, M	Q, M	Q, M	Q, M	Q, M
24	Air Refueling Procedures	Q			Q	Q(4)		Q
25	Transferring Station Responsibilities	M	M		M	M		M
26	Mission Execution/Battle Management	Q, M	Q, M	Q, M	Q, M	Q, M	M	Q, M
27	Special Instructions (SPINS)/ Rules of Engagement (ROE)/ Airspace Control Order (ACO)	M	M	M	M	M	M	M
28	Airspace Coordination	Q(1)	Q	Q	Q(5)			Q(5)
29	Control	Q(1)	Q	Q, M	Q(5)			Q(5)
30	Control Supervision	Q(1)	Q, M					
31	Sensor Operations	Q(2,3)		Q, M(6)	Q, M	Q, M(4,6)		
32	Data Link Operations	Q(2)			Q, M	Q, M		
33	Integration of Intelligence Assets	Q(3)						M
34	Tracking	Q(2)			Q, M	Q, M	Q, M	
35	Tell Functions	Q(2)			Q, M	Q, M	Q, M	
36	EA/EP Procedures	Q(2)			Q, M	Q, M	Q, M	Q, M
37	Signal of Interest Location and Reporting	Q(3)		Q, M(6)		Q, M(6)		Q, M
39	Identification				Q, M	Q, M	Q, M	

Note:

1. MCCs evaluated to these areas are certified in and may conduct SD duties.
2. MCCs evaluated to these areas are certified in and may conduct ASO duties.
3. MCCs evaluated to these areas are certified in and may conduct ECO duties.
4. SSTs evaluated to these areas are certified in and may conduct ASO duties.
5. Aircrew Members evaluated to these areas are certified to control live aircraft.
6. Aircrew Members evaluated to these areas are certified in and may conduct duties as PSO (Passive Sensor Operator).

Key:

Q - Examinee must accomplish all requirements identified as a QUAL evaluation. **(T-2)**.

M - Examinee must accomplish all requirements identified as a MSN evaluation. **(T-2)**.

Table 6.2. ABM, MSO QUAL and MSN Evaluation Requirements.

AREA	DESCRIPTION	ABM	MSO
20	Outbound/Inbound Procedures	Q	Q
21	Assuming Station Responsibilities	Q, M	Q, M
22	AWACS Monitor Procedures	Q	Q
23	Console Operations and Displays	Q, M	Q, M
24	Air Refueling Procedures	Q	Q
25	Transferring Station Responsibilities	M	M
26	Mission Execution / Battle Management	M	M
27	SPINS / ROE / ACO	M	M
28	Airspace Coordination	Q	
29	Control	Q, M	Q, M
31	Sensor Operations	Q	Q
32	Data Link Operations	Q(3)	Q(3)
33	Integration of Intelligence Assets	M (2)	
34	Tracking		Q
35	Tell Functions		Q
36	EA/EP Procedures	Q	Q
37	Signal of Interest Location and Reporting	M(2)	M(2)
38	ESM Operations / Troubleshooting	Q, M(2)	Q
40	Section Supervision	Q (1)	

Note:

1. Required for Section Lead (SL)-certified ABM evaluations.
2. Must only be evaluated on the MSN evaluation if observed.
3. To be evaluated if certified in this area.

Key:

Q - Examinee must accomplish all requirements identified as a QUAL evaluation. **(T-2)**.

M - Examinee must accomplish all requirements identified as a MSN evaluation. **(T-2)**.

6.4.1. Area 20 -- Outbound/Inbound Procedures:

6.4.1.1. **Q** . Coordinated, directed or performed equipment set up and checkout procedures in accordance with applicable directives. Reported status of console, communications, and other operator-tasked equipment in a timely manner. Performed inbound procedures in accordance with applicable directives. Notified/debriefed internal/external agencies/participants.

6.4.1.2. **Q** -. Performed outbound/inbound procedures with errors, omissions, or delays that did not jeopardize mission accomplishment.

6.4.1.3. **U** . Performed outbound/inbound procedures with errors, omissions, or delays that jeopardized mission accomplishment.

6.4.2. Area 21 -- Assuming Station Responsibilities:

6.4.2.1. **Q** . Accomplished or confirmed sensor/systems checkout and assumed station responsibility in accordance with applicable directives and in a timely manner.

6.4.2.2. **Q** -. Performed station assumption tasks with errors or omissions that did not jeopardize mission accomplishment.

6.4.2.3. **U** . Performed station assumption tasks with errors or omissions that jeopardized mission accomplishment.

6.4.3. Area 22 -- AWACS Monitor Procedures:

6.4.3.1. **Q** . Performed AWACS Monitor procedures in accordance with applicable directives.

6.4.3.2. **Q** -. Performed AWACS Monitor procedures with minor errors or omissions that did not jeopardize E-3 safety.

6.4.3.3. **U** . Failed to perform AWACS Monitor procedures in accordance with applicable directives, or performed with errors or omissions that jeopardized E-3 safety.

6.4.4. Area 23 -- Console Operations and Displays:

6.4.4.1. **Q** . Interpreted/initiated/updated data for console operations and displays in accordance with applicable directives. Operated console to accomplish mission while utilizing the console to optimize situational awareness.

6.4.4.2. **Q** -. Interpreted/initiated/updated data for console operations and displays in accordance with applicable directives with errors or omissions that did not jeopardize

mission accomplishment. Omissions or errors in console operations and displays contributed to a lack of situational awareness that did not jeopardize mission accomplishment.

6.4.4.3. **U** . Interpreted/initiated/updated data for console operations and displays in accordance with applicable directives with errors or omissions that jeopardized mission accomplishment. Omissions or errors in console operations and displays contributed to a lack of situational awareness that jeopardized mission accomplishment.

6.4.5. Area 24 -- Air Refueling Procedures:

6.4.5.1. **Q** . Accomplished/performed air refueling procedures in accordance with applicable directives and in a timely manner.

6.4.5.2. **Q** -. Accomplished/performed air refueling procedures with errors, omissions, or delays that did not jeopardize mission accomplishment.

6.4.5.3. **U** . Accomplished/performed air refueling procedures with errors, omissions, or delays that jeopardized mission accomplishment.

6.4.6. Area 25 -- Transferring Station Responsibilities:

6.4.6.1. **Q** . Established communications with relieving unit, verified link status, and ensured effective transfer of link responsibility to relieving unit was accomplished when applicable. Established priorities and coordinated responsibilities for tactical action, briefed relieving unit on appropriate information and air situation, and or confirmed relieving unit had assumed station responsibilities and directed termination of data links as required.

6.4.6.2. **Q** -. Transferred station responsibilities with errors, omissions, or delays that did not jeopardize mission accomplishment.

6.4.6.3. **U** . Transferred station responsibilities with errors, omissions, or delays that jeopardized mission accomplishment.

6.4.7. Area 26 -- Mission Execution/Battle Management:

6.4.7.1. **Q** . Developed/implemented a plan of execution that provided appropriate support to other sections of the crew and external agencies to accomplish mission objectives. Executed the assigned mission in accordance with applicable directives. Conducted the mission with a sense of understanding and comprehension.

6.4.7.1.1. MCC: Led mission crew in the prosecution of the air battle through the execution of OPORDs/OPLANs in accordance with applicable directives. Effectively managed the mission/battle through fighter flow, tanker management, sensor management, communications, and production of a recognizable air picture. Maintained documentation and logs.

6.4.7.1.2. SD: Led weapons team in tactical employment of assigned aircraft to successfully accomplish mission tasking in accordance with applicable directives.

6.4.7.1.3. ASO: Led surveillance team in execution of assigned mission aircraft to successfully accomplish mission tasking in accordance with applicable directives.

6.4.7.1.4. Section Lead (SL): Led the crew/section in the prosecution of the air battle through mission planning and execution of OPORDs/OPLANs in accordance with applicable directives. Effectively managed the mission/battle within their crew/section through applicable fighter flow, tanker management, sensor management configuration/management, target management, communications, and production of a recognizable air picture. Ensured the crew/section controlled assigned missions to the level requested and/or followed the continuum of control to the maximum extent possible. Ensured that situation/threat information was provided to aircraft in a timely and accurate manner. Allocated resources in accordance with tactical situations or directives. Maintained appropriate documentation and logs.

6.4.7.2. **Q** -. Planned, executed/led the assigned mission with errors, omissions or delays that did not jeopardize overall mission accomplishment. Resources were not effectively used to the point that specific mission objectives were not achieved. Displayed minor deviations from regulations/directives and/or was slow to prepare/lead in assigned battle management functions. Maintained documentation and logs with errors or omissions that did not jeopardize mission accomplishment.

6.4.7.3. **U** . Decisions or lack thereof, resulted in failure to accomplish the assigned mission. Errors, omissions or delays jeopardized mission accomplishment. Demonstrated poor judgment to the extent that overall mission objectives were not achieved. Regulations/directives were intentionally violated. Failed to maintain documentation that jeopardized mission accomplishment. Failed to prepare and/or lead in assigned battle management functions.

6.4.8. Area 27 -- Special Instructions (SPINS)/Rules of Engagement (ROE)/Airspace Control Order (ACO):

6.4.8.1. **Q** . Implemented SPINS, ROE, ACO and/or other tactical documents associated to the scenario. Identification (e.g., Bogey, Bandit, Hostile) procedures, engagement authorization, search and rescue (SAR) procedures, and/or other SPINS guidance were understood, briefed, and/or executed as appropriate in a timely manner. Maintained situational awareness on implemented procedures.

6.4.8.2. **Q** -. Implemented SPINS, ROE, ACO and/or other tactical documents associated to the scenario with errors or omissions that did not jeopardize mission accomplishment. Identification (e.g., Bogey, Bandit, Hostile) procedures, engagement authorization, SAR procedures, and/or other SPINS guidance were understood, briefed and/or executed with errors, omissions or delays that did not jeopardize mission accomplishment. Situational awareness of implementation was maintained with omissions that did not jeopardize mission accomplishment.

6.4.8.3. **U** . Implemented SPINS, ROE, ACO and/or other tactical documents associated to the scenario with errors or omissions that jeopardized mission requirements. Identification (e.g., Bogey, Bandit, Hostile) procedures, engagement authorization, SAR procedures, and/or other SPINS guidance were understood, briefed, and/or executed with errors, omissions or delays that jeopardized mission accomplishment. Failed to maintain an acceptable level of situational awareness on implemented procedures.

6.4.9. Area 28 -- Airspace Coordination:

6.4.9.1. **Q** . If required by Letter of Agreement (LOA), airspace coordination was accomplished leaving the lead-time required to ensure mission accomplishment. Verified that airspace restrictions and limitations were passed in accordance with applicable directives.

6.4.9.2. **Q** -. Conducted airspace coordination with errors or omissions that did not jeopardize mission accomplishment.

6.4.9.3. **U** . Conducted airspace coordination with errors or omissions that jeopardized mission accomplishment.

6.4.10. Area 29 -- Control:

6.4.10.1. **Q** . Controlled aircraft consistent with continuum of control and considered the enemy order of battle. Kept aircraft informed of all factor groups through "picture" and threat calls. Provided/updated threat information (to include changes in targets and enemy order of battle) to aircraft under control. Threat information was timely and aided in mission accomplishment. Positioned aircraft to accomplish mission objectives in accordance with AFI 11-214, *Air Operations Rules and Procedures* and/or AFTTP 3-1.AWACS, and consistent with aircraft capabilities, rules of engagement, operations directives, and battle staff direction.

6.4.10.2. **Q** -. Controlled aircraft with errors or omissions that did not jeopardize mission accomplishment.

6.4.10.3. **U** . Controlled aircraft with errors or omissions that jeopardized mission accomplishment. Positioning was not consistent with continuum of control, mission objectives, operations directives, rules of engagement, or battle staff direction.

6.4.10.4. MSO: **Q**. Accomplished assigned control team duties and contracts, aided in mission accomplishment and passage of timely identification and threat information. Assisted in control of aircraft consistent with continuum of control and considered the enemy order of battle. Proactively passed information to crewmembers in support of assigned mission(s).

6.4.10.5. MSO: **Q-**. Performed assigned control team duties and passed information with delay(s) to crewmembers with errors or omissions that did not jeopardize mission accomplishment.

6.4.10.6. MSO: **U**. Performed assigned control team duties and passed information with delay(s) to crewmembers with errors or omissions that did not jeopardize mission accomplishment.

6.4.11. Area 30 – Control Supervision:

6.4.11.1. **Q** . Ensured the weapons team had radios, sensors, airspace, etc. necessary to control. Ensured the team controlled assigned missions to the level requested and/or followed the continuum of control to the maximum extent possible. Supervised weapons team to the extent needed to achieve mission accomplishment. Provided/updated threat information (to include changes in targets and/or enemy order of battle) to the crew. Ensured that situation/threat information was provided to aircraft in a timely and accurate manner. Allocated weapons resources in accordance with tactical situations or directives.

6.4.11.2. **Q** -. Ensured the weapons team had radios, sensors, airspace, etc. necessary to control. Ensured the team controlled assigned missions to the level requested and/or followed the continuum of control, to the maximum extent possible, with errors or omissions that did not jeopardize mission accomplishment. Provided/updated threat information (to include changes in targets and enemy order of battle) and supervised the weapons team with errors or omissions that did not jeopardize mission accomplishment. Situation/threat information provided to aircraft had errors or omissions that did not jeopardize mission accomplishment. Allocated weapons resources with errors or omissions that did not jeopardize mission accomplishment.

6.4.11.3. **U** . Failed to ensure the weapons team had radios, sensors, airspace, etc. necessary to control. Did not ensure that the team controlled assigned missions to the level requested and/or followed the continuum of control. Failed to provide/update threat information (to include changes in targets and enemy order of battle) to the crew correctly or in a timely manner. Failed to ensure that situation/threat information was provided to aircraft in a timely manner. Errors or omissions jeopardized mission accomplishment. Allocated weapons resources with errors or omissions that jeopardized mission accomplishment.

6.4.12. Area 31 -- Sensor Operations:

6.4.12.1. **Q** . Configured and optimized sensors to accomplish assigned mission. Employed, monitored, recognized, analyzed, took corrective measures, and reported degraded sensor performance. Coordinated with technicians to identify and correct sensor problems. Demonstrated an understanding of sensor theory, processing, and optimization leading to mission accomplishment.

6.4.12.2. **Q** -. Configured/optimized, employed, and/or analyzed sensors with errors, omissions or delays that did not jeopardize mission accomplishment. Demonstrated minor deviations regarding sensor theory, processing, and/or optimization.

6.4.12.3. **U** . Failed to properly configure/optimize sensors for assigned mission. Employed and/or analyzed sensors with errors, omissions or delays that jeopardized mission accomplishment. Demonstrated a lack of understanding of sensor theory, processing, and/or optimization.

6.4.12.4. ABM: **Q**. Configured and optimized active sensors to accomplish assigned mission. Employed, monitored, recognized, took corrective measures, and reported degraded sensor performance to SL.

6.4.12.5. ABM: **Q-**. Employed active sensors with errors, omissions or delays that did not jeopardize mission accomplishment. Demonstrated minor deviations regarding processing, and/or optimization.

6.4.12.6. ABM: **U**. Failed to properly configure/optimize active sensors for assigned mission. Employed and/or analyzed sensors with errors, omissions or delays that jeopardized mission accomplishment.

6.4.12.7. MSO: **Q**. Employed, monitored, recognized, took corrective measures, and reported degraded active sensor performance to ABM and/or SL.

6.4.12.8. MSO: **Q-**. Employed, monitored, recognized or reported degraded active sensor performance with errors or omissions that did not jeopardize mission accomplishment.

6.4.12.9. MSO: **U**. Failed to employ, monitor, recognize and/or report degraded active sensor performance for assigned mission.

6.4.12.10. MSO Certified for Active Sensor Management: **Q**. Configured and optimized active sensors to accomplish assigned mission. Employed, monitored, recognized, analyzed, took corrective measures, and reported degraded sensor performance. Coordinated with technicians to identify and correct active sensor problems. Demonstrated an understanding of active sensor theory, processing, and optimization leading to mission accomplishment.

6.4.12.11. MSO Certified for Active Sensor Management: **Q-**. Configured/optimized, employed, and/or analyzed active sensors with errors, omissions or delays that did not jeopardize mission accomplishment. Demonstrated minor deviations regarding active sensor theory, processing, and/or optimization.

6.4.12.12. MSO Certified for Active Sensor Management: **U**. Failed to properly configure/optimize active sensors for assigned mission. Employed and/or analyzed active sensors with errors, omissions or delays that jeopardized mission accomplishment. Demonstrated a lack of understanding of active sensor theory, processing, and/or optimization.

6.4.13. Area 32 -- Data Link Operations:

6.4.13.1. **Q** . Supervised and/or configured, operated, and terminated data links in accordance with applicable directives. Ensured data links were established and maintained in accordance with applicable directives as required. Analyzed/troubleshot data link operations as required. Assisted in troubleshooting link hardware problems as required. Monitored data link coordination net and/or track supervision net as required. Displayed a thorough understanding of data link operations.

6.4.13.2. **Q** -. Supervised and/or performed data link procedures with errors, omissions, or delays that did not jeopardize mission accomplishment. Displayed minor deviations of understanding of data link operations.

6.4.13.3. **U** . Failed to supervise and/or configure, operate, maintain or terminate data links in accordance with published directives. Performed data link operations with errors or omissions that jeopardized mission accomplishment. Displayed inadequate understanding of data link operations.

6.4.14. Area 33 -- Integration of Intelligence Assets:

6.4.14.1. **Q** . Coordinated via voice or data links with intelligence assets (external agencies, Special Information System/Voice Product Net (SIS/VPN), internal assets, other) and disseminated information in a manner that enhanced aircrew awareness and mission accomplishment.

6.4.14.2. **Q** -. Coordinated with intelligence assets and disseminated intelligence information with minor errors or omissions that did not degrade aircrew awareness or jeopardize mission accomplishment.

6.4.14.3. **U** . Failed to coordinate with intelligence assets or to disseminate intelligence information. Deviations could have degraded aircrew awareness or jeopardized mission accomplishment.

6.4.15. Area 34 -- Tracking:

6.4.15.1. **Q** . Supervised/conducted tracking as required in accordance with applicable directives. Recognized, initiated, maintained track-on-data continuity, and resolved any track attention conditions during tactical tracking event (a minimum of 20 non-maneuvering tracks may be used in lieu of tactical tracking event) in accordance with mission tasking or as directed. Tactical tracking event requires a minimum of two aircraft.

6.4.15.2. **Q** -. Supervised/conducted tracking or resolution of track attention conditions with errors or omissions that did not jeopardize mission accomplishment.

6.4.15.3. **U** . Supervised/conducted tracking or resolution of track attention conditions with errors or omissions that jeopardized mission accomplishment.

6.4.16. Area 35 -- Tell Functions:

6.4.16.1. **Q** . Supervised/conducted required tell functions (voice/data link) in accordance with mission tasking and as directed.

6.4.16.2. **Q** -. Supervised/conducted required tell functions (voice/data link) with errors or omissions that did not jeopardize mission accomplishment.

6.4.16.3. **U** . Supervised/conducted required tell functions (voice/data link) with errors or omissions that jeopardized mission accomplishment.

6.4.17. Area 36 -- Electronic Attack/Electronic Protect (EA/EP) Procedures:

6.4.17.1. **Q** . Recognized, located, tracked, and reported EA emitters and/or countered radar, IFF, and/or communications (voice and/or data link) EA. Employed/evaluated effects of EP procedures in accordance with mission tasking and directives. Assigned/directed the surveillance team responses as required.

6.4.17.2. **Q** -. Completed EA/EP Procedures with errors or omissions that did not jeopardize mission accomplishment.

6.4.17.3. **U** . Completed EA/EP Procedures with delays, errors or omissions that jeopardized mission accomplishment.

6.4.18. Area 37 -- Signal of Interest (SOI) Location and Reporting:

6.4.18.1. **Q** . Monitored and updated ESM information in data links. Used active and passive means to locate SOIs. Located ground/surface SOIs, correlated air SOIs, and maintained logs in accordance with applicable directives. Report SOIs to crew and external agencies as required. Coordinated via voice or data links with intelligence assets (external agencies, SIS/VPN, internal assets, other) and disseminated information in a manner that enhanced aircrew awareness and mission accomplishment.

6.4.18.2. **Q** . MSO: Monitored and updated ESM information in data links. Used active and passive means to locate SOIs. Located ground/surface SOIs, correlated air SOIs, and maintained logs in accordance with applicable directives. Report SOIs to crew and external

agencies as required. Assisted ABM in accordance with applicable directives. Coordinated with crew and maintained logs in accordance with applicable directives.

6.4.18.3. **Q** -. Performed SOI location and reporting with errors or omissions that did not jeopardize mission accomplishment.

6.4.18.4. **U** . Performed SOI location and reporting with errors or omissions that jeopardized mission accomplishment.

6.4.19. Area 38 -- ESM Operations and Troubleshooting:

6.4.19.1. **Q** . Demonstrated knowledge of ESM system/operations. Manipulated PDS displays, database, and scan strategy to meet mission requirements. Performed functional analysis and accurate electronic identification. Monitored PAD and identified loss of/inconsistent data. Recognize problems and coordinated with SL to identify and correct hardware problems. Adjusted ESM parameters and/or recommended orbit changes to overcome ESM problems as required.

6.4.19.2. SL: **Q**. Demonstrated thorough knowledge and proficiency of ESM system/operations. Manipulated PDS displays, database, and scan strategy to meet mission requirements. Performed functional analysis and accurate electronic identification. Monitored PAD and identified loss of/inconsistent data. Recognize problems and coordinated with Technicians to identify and correct hardware problems. Adjusted ESM parameters and/or recommended orbit changes to overcome ESM problems as required.

6.4.19.3. **Q** -. Performed ESM operations and troubleshooting with errors or omissions that did not jeopardize mission accomplishment.

6.4.19.4. **U** . Performed ESM operations and troubleshooting with errors or omissions that jeopardized mission accomplishment.

6.4.19.5. MSO: **Q**. Demonstrated knowledge of ESM system/operations. Configured ESM displays and settings in accordance with crew contracts/coordination to accomplish mission objectives.

6.4.19.6. MSO: **Q-**. Demonstrated minor deficiencies in knowledge and/or proficiency relating to ESM systems. Configured ESM displays and settings with minor errors or omissions that did not jeopardize mission accomplishment. Recognize problems and coordinated with ABM and/or SL to identify and correct hardware problems.

6.4.19.7. MSO: **U**. Demonstrated lack of knowledge and/or proficiency relating to ESM systems. Configured ESM displays and settings with errors or omissions that jeopardized mission accomplishment.

6.4.20. Area 39 -- Identification:

6.4.20.1. **Q** . Conducted identification function in accordance with mission tasking and as directed.

6.4.20.2. **Q-** . Conducted identification function with errors, delays, or omissions that did not jeopardize mission accomplishment.

6.4.20.3. **U** . Conducted identification function with errors, delays, or omissions that could have jeopardized mission accomplishment.

6.4.21. Area 40 -- Section Supervision:

6.4.21.1. **Q** . Ensured assigned section had radios, sensors, airspace, etc. necessary to execute mission. Ensured the team executed assigned missions to the level requested and/or followed the continuum of control to the maximum extent possible. Supervised to the extent needed to achieve mission accomplishment. Provided/updated threat information (to include changes in targets and/or enemy order of battle) to the crew. Ensured that situation/threat information was provided to aircraft in a timely and accurate manner. Allocated resources in accordance with tactical situations or directives.

6.4.21.2. **Q** -. Ensured assigned section had radios, sensors, airspace, etc. necessary to execute mission. Ensured the team executed assigned missions to the level requested and/or followed the continuum of control, to the maximum extent possible, with errors or omissions that did not jeopardize mission accomplishment. Provided/updated threat information (to include changes in targets and enemy order of battle) and supervised with errors or omissions that did not jeopardize mission accomplishment. Situation/threat information provided to aircraft had errors or omissions that did not jeopardize mission accomplishment. Allocated resources with errors or omissions that did not jeopardize mission accomplishment.

6.4.21.3. **U** . Failed to ensure the assigned section had radios, sensors, airspace, etc. necessary to execute mission. Did not ensure that the team executed assigned missions to the level requested and/or followed the continuum of control. Failed to provide/update threat information (to include changes in targets and enemy order of battle) to the crew correctly or in a timely manner. Failed to ensure that situation/threat information was provided to aircraft in a timely manner causing errors or omissions jeopardized mission accomplishment. Allocated resources with errors or omissions that jeopardized mission accomplishment.

Chapter 7

AIRBORNE TECHNICIAN/SYSTEMS OPERATOR EVALUATIONS

7.1. General. This chapter contains the task oriented criteria for all evaluations in accordance with AFI 11- 202V2, and AFI 11-401. Evaluation requirements are outlined in matrices for Communications Systems Operator (CSO), Communications Technician (CT), Computer Display Maintenance Technician (CDMT), and Airborne Radar Technician (ART).

7.2. Evaluation Objectives:

7.2.1. QUAL/MSN evaluations will encompass all areas identified in **Table 7.1** for the position performed. **(T-2)**. The examinee must demonstrate a degree of knowledge and proficiency as described in the positional task listing essential for successful mission accomplishment and safety of flight. **(T-2)**. Examinee must demonstrate the ability to operate, manage and maintain all equipment associated with the position performed. **(T-2)**.

7.2.2. Airborne Communications Specialist: This section contains the task-oriented criteria for QUAL/MSN evaluations of an Airborne Communications Specialist (ACS) performing duties as the CSO, Instructor Communications Systems Operator (ICSO), CT, and Instructor Communications Technician (ICT).

7.2.2.1. Evaluations will be conducted on a live E-3 sortie. **(T-2)**.

7.2.2.2. Evaluations will be performed upon the completion of IQT, career enhancement training (CET), instructor upgrade training, and recurring evaluations. **(T-2)**.

7.2.2.3. Aircraft configuration may dictate that additional systems be evaluated if the examinee has been trained and certified in those systems.

7.2.2.4. Crewmembers completing CET will receive an evaluation in the CSO and CT position making them multiple-qualified. **(T-2)**.

7.2.2.5. Multi-qualified crewmembers will receive recurring evaluations in both the CSO and CT position. **(T-2)**.

7.2.3. Computer Display Maintenance Technician (CDMT).

7.2.3.1. CDMT QUAL/MSN evaluations will be conducted on a live E-3 sortie. **(T-2)**.

7.2.3.2. One in-flight maintenance procedure must be performed or simulated. **(T-2)**.

7.2.3.3. Examinee must demonstrate satisfactory ability to operate and maintain the data processing, data display, ESM system, and testing systems to include loading and operation of airborne operating systems, data processing system, post mission checkout, and at least one utility program. **(T-2)**.

7.2.4. Airborne Radar Technician (ART).

7.2.4.1. ART QUAL/MSN evaluations will be conducted on a live E-3 sortie. **(T-2)**.

7.2.4.2. Examinee must demonstrate satisfactory ability to operate and maintain the radar and IFF systems. **(T-2)**. This includes loading and operation of Radar Operational Program, post-station checkout using Radar Test or Configuration Evaluation in one chain,

two manual test procedures (one using a transmitter sample), and one level of Fault Isolation Test (FIT).

7.3. Criteria. All areas in this section will be graded using the grading policy in AFI 11-202V2 and any criteria listed within the individual areas. **(T-2)**.

Table 7.1. Airborne Technicians/Systems Operator QUAL Evaluation Requirements.

AREA	DESCRIPTION	CSO	CT	CDMT	ART
20	Before Start/Taxi	Q/M	Q/M	Q/M	Q/M
21	Outbound Procedures	Q/M	Q/M	Q/M	Q/M
22	Data Link Operations	Q/M	Q/M		
23	Conducting Mission Operations	Q/M(1)	Q/M		
24	Console Operations/Displays	Q/M		Q/M	
25	Radar System Improvement Program (RSIP) Console Operations and Displays				Q/M
26	On Station Procedures			Q/M	Q/M
27	General Use Procedures			Q/M	Q/M
28	Peripheral Device Operation			Q/M	
29	Utility Programs			Q/M	
30	Air Refueling Procedures	Q/M	Q/M	Q/M	Q/M
31	Radio/Telephone (R/T) Procedures	Q/M	Q/M		
32	Malfunction Analysis/In-flight Maintenance		Q/M	Q/M	Q/M
33	Post Mission System Checkout		Q/M	Q/M	Q/M
34	Inbound Procedures	Q/M	Q/M	Q/M	Q/M

Note:

1. HQAN Update Switch Actions portions will not be evaluated.

Key:

Q/M – Examinee must accomplish all requirements identified as QUAL/MSN evaluations. **(T-2)**.

7.3.1. Area 20 -- Before Start/Taxi:

7.3.1.1. **Q** . Performed before start/taxi procedures in accordance with applicable directives.

7.3.1.2. **Q** -. Performed before start/taxi procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.1.3. **U** . Performed before start/taxi procedures with errors or omissions that jeopardized mission accomplishment.

7.3.2. Area 21 -- Outbound Procedures:

7.3.2.1. **Q** . Performed outbound procedures in accordance with applicable directives.

7.3.2.2. **Q** -. Performed outbound procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.2.3. **U** . Performed outbound procedures with errors or omissions that jeopardized mission accomplishment.

7.3.3. Area 22 -- Data Link Operations:

7.3.3.1. **Q** . Configured, operated, and terminated data links in accordance with applicable directives.

7.3.3.2. **Q** -. Configured, operated, or terminated data links with errors or omissions that did not jeopardize mission accomplishment.

7.3.3.3. **U** . Failed to configure, operate, or terminate data links. Performed data link operations with errors or omissions that jeopardized mission accomplishment.

7.3.4. Area 23 -- Conducting Mission Operations:

7.3.4.1. **Q** . Monitored radios and mission nets and performed required changes (e.g., radio/ frequency/baseband distribution panel (BDP)). Performed update switch actions for HAVE QUICK A Net (HQAN), and communications related software in accordance with applicable directives.

7.3.4.2. **Q** -. Monitored radios or mission nets or performed required changes with errors or omissions that did not jeopardize mission accomplishment. Performed update switch actions for HQAN, Joint Tactical Information Distribution System (JTIDS), and communications related software with errors or omissions that did not jeopardize mission accomplishment.

7.3.4.3. **U** . Failed to monitor radios or mission nets or performed required changes, or monitored with errors or omissions that jeopardized mission accomplishment. Failed to perform update switch actions for HQAN, JTIDS, and communications related software, or performed with errors or omissions that jeopardized mission accomplishment.

7.3.5. Area 24 -- Console Operations/Displays:

7.3.5.1. **Q** . Interpreted and updated data for computer displays, accomplished switch actions, and responded to alarms and alerts in accordance with applicable directives.

7.3.5.2. **Q** -. Interpreted and updated data for computer displays, accomplished switch actions, or responded to alarms and alerts with errors or omissions that did not jeopardize mission accomplishment.

7.3.5.3. **U** . Interpreted and updated data for computer displays, accomplished switch actions, or responded to alarms and alerts with errors or omissions that jeopardized mission accomplishment.

7.3.6. Area 25 -- RSIP Console Operations & Displays:

7.3.6.1. **Q** . Interprets/analyzes menus and screens to configure radar for optimum system performance. Interprets the Fast Fourier Transform (FFT), Plan Position Indicator (PPI), or Spectrum Analyzer displays in accordance with applicable directives.

7.3.6.2. **Q** -. Interprets/analyzes menus and screens with minor errors, omissions, or delays in effort to configure radar for optimum system performance that did not jeopardize mission accomplishment. Interprets the FFT, PPI, or Spectrum Analyzer displays with errors or omissions that did not detract from mission operations.

7.3.6.3. **U** . Failed to Interpret/analyze menus and screens in effort to configure radar for optimum system performance that jeopardized mission accomplishment. Interpreted the FFT, PPI, or Spectrum Analyzer displays with errors or omissions that could have detracted from mission operations.

7.3.7. Area 26 -- On-Station Procedures:

7.3.7.1. **Q** . Performed on station procedures in accordance with applicable directives.

7.3.7.2. **Q** -. Performed on station procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.7.3. **U** . Performed on station procedures with errors, omissions, or delays that jeopardized mission accomplishment.

7.3.8. Area 27 -- General Use Procedures:

7.3.8.1. **Q** . Performed general use procedures in accordance with applicable directives.

7.3.8.2. **Q** -. Performed general use procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.8.3. **U** . Performed general use procedures with errors or omissions that jeopardized mission accomplishment.

7.3.9. Area 28 -- Peripheral Device Operation:

7.3.9.1. **Q** . Maintained and operated peripheral devices in accordance with applicable directives.

7.3.9.2. **Q** -. Maintained or operated peripheral devices with errors or omissions that did not jeopardize mission accomplishment.

7.3.9.3. **U** . Failed to maintain peripheral devices with errors or omissions that jeopardized mission accomplishment.

7.3.10. Area 29 -- Utility Programs:

7.3.10.1. **Q** . Loaded and executed utility programs. Interpreted and responded to prompts and error codes in accordance with applicable directives.

7.3.10.2. **Q** -. Loaded and executed utility programs, and interpreted and responded to prompts/error codes with errors, omissions, or delays that did not jeopardize mission accomplishment.

7.3.10.3. **U** . Failed to correctly load or execute utility programs. Misinterpreted or failed to respond to prompts/error codes that jeopardized mission accomplishment.

7.3.11. Area 30 -- Air Refueling Procedures:

7.3.11.1. **Q** . Performed air refueling procedures in accordance with applicable directives.

7.3.11.2. **Q** -. Performed air refueling procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.11.3. **U** . Performed air refueling procedures with errors or omissions that jeopardized mission accomplishment.

7.3.12. Area 31 -- Radio/Telephone (R/T) Procedures:

7.3.12.1. **Q** . Employed standard R/T procedures in accordance with applicable directives.

7.3.12.2. **Q** -. Employed standard R/T procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.12.3. **U** . Failed to employ standard R/T procedures. Used R/T procedures with errors or omissions that jeopardized mission accomplishment.

7.3.13. Area 32 -- Malfunction Analysis/In-Flight Maintenance:

7.3.13.1. **Q** . Recognized and analyzed malfunctions and performed in-flight maintenance in accordance with applicable directives.

7.3.13.2. **Q** -. Recognized and analyzed malfunctions or performed in-flight maintenance with errors or omissions that did not jeopardize mission accomplishment.

7.3.13.3. **U** . Failed to recognize or analyze malfunctions or performed in-flight maintenance with errors or omission that jeopardized mission accomplishment.

7.3.14. Area 33 -- Post Mission System Checkout:

7.3.14.1. **Q** . Loaded and executed diagnostic programs, interpreted and responded to indicators and codes in accordance with applicable directives.

7.3.14.2. **Q** -. Loaded or executed diagnostic programs, interpreted and responded to indicators and codes with errors, omissions, or delays that did not jeopardize maintenance analysis or mission accomplishment.

7.3.14.3. **U** . Failed to correctly load or execute diagnostic programs or failed to respond to indicators or codes. Misinterpreted or responded to indicators or codes with errors, omissions, or delays that jeopardized maintenance analysis or mission accomplishment.

7.3.15. Area 34 -- Inbound Procedures:

7.3.15.1. **Q** . Performed inbound procedures in accordance with applicable directives.

7.3.15.2. **Q** -. Performed inbound procedures with errors or omissions that did not jeopardize mission accomplishment.

7.3.15.3. **U** . Performed inbound procedures with errors or omissions that jeopardized mission accomplishment.

Chapter 8

TEST UNIT MULTIPLE QUALIFICATION

8.1. ACC E-3 Flight Deck Multiple Qualification authorization for test units. Due to unique mission requirements, pilots and flight engineers permanently assigned to an ACC recognized test unit are authorized to gain and maintain a Multiple Qualification for AWACS DRAGON (DMA) and non-DMA aircraft.

8.1.1. ACC recognizes the 605 TES/Det 1 (ACC component of AWACS Combined Test Force) test unit.

8.2. Air Force Material Command (AFMC) E-3 Qualifications. Aircrew members permanently assigned to AFMC units do not require separate DMA and non-DMA qualifications. AF Form 8 shall have "E-3" as the designated Mission Design Series (MDS). Upon completion of conversion training in each variant of an 707/E-3/E-8 MDS aircraft the aircrew member's, pilot or flight engineer, qualification is considered to be single qualification that covers all variants.

8.3. Initial Multiple Qualification. Pilots and flight engineers permanently assigned to ACC test unit must have one of the following combinations of training or qualifications to gain a Multiple Qualification:

8.3.1. Be identified on an Initial Cadre Letter that authorizes dual qualification in DMA and non-DMA E-3.

8.3.2. Possess a current multiple qualification in a DMA and Non-DMA E-3.

8.3.3. Possess a current qualification in a Non-DMA USAF E-3 and have executed an approved training plan in a DMA aircraft.

8.3.4. Possess a current qualification in a DMA USAF E-3 and have executed an approved training plan in a non-DMA aircraft.

8.4. Requalification to gain Initial Multiple Qualification. E-3 Pilots and Flight Engineers previously qualified in a USAF E-3 who were not DMA initial cadre, dual qualified (DMA/non-DMA), or E-3 multiple qualified will execute the training and qualifications in accordance with AFMAN 11-2E-3V1 and this manual. AFMAN 11-2E-3V1 requirements must only be accomplished in one MDS (DMA or Non-DMA) reference **Table 4.7** Additionally the aircrew member will execute an approved training plan for the MDS series they did not receive their Requalification evaluation in.

8.5. Requalification for Multiple Qualification. Previously Multiple Qualified USAF E-3 pilots and flight engineers who are currently unqualified will execute the training and qualifications as stated in AFMAN 11-2E-3V1 and this manual. Requalification in one series will result in a multiple qualification.

8.6. ACC recognized test units. NATO/NAEW E-3 Pilots and Flight Engineers gained by test units do not require an evaluation in a DMA aircraft for DMA qualification if the individual has a current NATO E-3 qualification. The individual's previous NATO/NAEW Communication, Navigation, Surveillance (CNS)/Air Traffic Management (ATM) qualification can be accepted by the unit's SQ/CC if a NATO USAF difference training plan is accomplished. The NATO-USAF Difference-Training, must at a minimum, include:

8.6.1. One flight in the CONUS. **(T-2)**.

8.6.2. Squadron approved academic training plan that includes that addresses CNS/ATM vs DRAGON differences. **(T-2)**.

8.6.3. USAF flight regulations review to include AFMAN 11-202V1/2/3, AFMAN 11-2E-3V1/2/3, applicable wing and group supplements, and local aircrew aids. **(T-2)**.

8.6.4. Additional flights and simulator sessions will be determined by the gaining unit in coordination with the unit's respective OGV. **(T-2)**.

8.6.5. NATO/NAEW qualification expiration will be in accordance with AFMAN 11-202V2 and applicable MAJCOM supplements. This only pertains to qualification on DMA aircraft. See **paragraph 8.3.2** for gain of Multiple Qualification.

8.7. Periodic Evaluations. For periodic evaluations DMA or non-DMA requisite events will count as both DMA and non-DMA events. Pilots and flight engineers can take the DMA or non-DMA closed/open book exam, can execute a DMA or non-DMA requisite EPE and can execute the annual evaluation in a DMA or non-DMA aircraft.

8.8. Evaluation documentation:

8.8.1. ACC test unit aircrews who gain/maintain a single qualification annotate "E-3 B/C/G" or "E-3GII" for non-DMA and DMA qualifications respectively in the MDS block on the AF Form 8.

8.8.1.1. ACC test unit aircrews who gain/maintain a multiple qualification will:

8.8.1.1.1. Annotate "E-3" in the MDS block. **(T-2)**.

8.8.1.1.2. Annotate "Multiple Qualification" if members is multiple qualified in DMA and non-DMA E-3 aircraft" in Comments (Section VII) under Examiners Remarks: A. Mission Description.

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Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 21 September 2018

AFI 11-214, *Air Operations Rules and Procedures*, 8 July 2020

AFI 33-322, *Records Management and Information Governance Program*, 28 July 2021

AFMAN 11-202V2, *Aircrew Standardization and Evaluation Program*, 30 August 2021

AFMAN 11-290, *Cockpit/Crew Resource Management Program and Threat Error Management Program*, 25 October 2021

AFMAN 11-2E-3V1, *E-3 Aircrew Training*, 20 June 2020

AFMAN 11-2E-3V3, *E-3 Operations Procedures*, 20 October 2020

AFPD 11-2, *Aircrew Operations*, 31 January 2019

AFPD 11-4, *Aviation Service,* 12 April 2019

AFI 11-202V2, *Aircrew Standardization and Evaluation Program*, 6 December 2018

AFI 11-2E-3V3, *E-3 Operations Procedures,* 2 March 2016

AFI 11-214, *Air Operations Rules and Procedures*, 14 August 2012

AFI 11-290, *Cockpit/Crew Resource Management Program*, 27 May 2020

AFI 11-401, *Aviation Management*, 10 December 2010

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFI 33-360, *Publications and Forms Management*, 1 December 2015

AFMAN 11-2E-3V1, *E-3 Aircrew Training*, 20 June 20

AFMAN 11-210, *Instrument Refresher Program (IRP)*, 4 October 2019

ATP 3.3.4.2, *Air-to-Air Refueling ATP-56*, 18 November 2013

AFTTP 3-1.AWACS, *Tactical Employment*, 14 April 2015

AFTTP 3-3.AWACS, *Combat Aircraft Fundamentals – AWACS*, 14 April 2015

DAFI 33-360, *Publications and Forms Management*, 1 December 2015

DAFMAN 11-401, *Aviation Management*, 27 October 2020

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 847, *Recommendation for Change of Publication*

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

Abbreviations and Acronyms

AAR—Air-to-Air Refueling

ABM—Air Battle Manager

AC—Aircraft Commander

ACC—Air Combat Command

ACO—Airspace Control Order

ACS—Airborne Communications Specialist

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Material Command

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFTTP—Air Force Tactics, Techniques, and Procedures

AOD—Air Operations Directive

APU—Auxiliary Power Unit

ART—Airborne Radar Technician

ASO—Air Surveillance Officer

AST—Air Surveillance Technician

ATC—Air Traffic Control

ATD—Aircrew Training Device

ATM—Air Traffic Management

AWACS—Airborne Warning and Control System

BDP—Baseband Distribution Panel

CDI—Course Deviation Indicator

CDMT—Computer Display Maintenance Technician

CET—Career Enhancement Training

CFP—Computer Flight Plan

CNS—Communication, Navigation, Surveillance

COMSEC—Communications Security

CONUS—Continental United States

CP—Copilot

CSO—Communications Systems Operator

CT—Communications Technician

Det—Detachment

DMA—DRAGON Modified Aircraft

DETCO—Detachment Commander

DMS—Diminishing Manufacturing Sources

DRAGON—Diminishing Manufacturing Sources Replacement of Avionics for Global Operations and Navigation

E—Evaluator when used as a prefix for a crew position (i.e., EFE – Evaluator Flight Engineer)

EA/EP—Electronic Attack/Electronic Protect

ECO—Electronic Combat Officer

EPE—Emergency Procedures Evaluation

EPR—Exhaust Pressure Ratio

ESM—Electronic Support Measures

FFT—Fast Fourier Transform

FAF—Final Approach Fix

FCIF—Flight Crew Information File

FE—Flight Engineer

FIT—Fault Isolation Test

FLIP—Flight Information Publications

FP—First Pilot

GINS—Global Positioning Integrated Navigation System

GS—Groundspeed

HQAN—HAVE QUICK A Net

I—Instructor when used as a prefix for a crew position (i.e., ISD – Instructor Senior Director)

IAS—Indicated Airspeed

IFA—In-Flight Alignment

IFF—Identification, Friend or Foe

IFR—Instrument Flight Rules

INIT—Initial

INS—Inertial Navigation System

INSTM—Instrument

INSTR—Instructor

INU—Inertial Navigation Unit

IQT—Initial Qualification Training

IRP—Instrument Refresher Program

JTIDS—Joint Tactical Information Distribution System

LOA—Letter of Agreement

LOP—Local Operating Procedures

MAC—Mean Aerodynamic Chord

MAJCOM—Major Command

MAP—Missed Approach Point

MCC—Mission Crew Commander

MDA—Minimum Descent Altitude

MDS—Mission Design Series

MSLITE—Mission Simulator Live Intercept Training Environment

MSN—Mission

MSO—Mission System Operator

MQF—Master Question File

N/N—No-Notice evaluations

NAEW—NATO Airborne Early Warning

NAV—Navigator

NATO—North Atlantic Treaty Organization

NAVAIDS—Navigational Aids

NM—Nautical Mile

OFT—Operational Flight Trainer

OGV—Operations Group Stan/Eval

OPLAN—Operational Plan

OPORD—Operational Order

ONC—Operational Navigation Chart

OPR—Office of Primary Responsibility

OPSEC—Operational Security

OPTASKLINK—Operational Tasking Data Link

PACAF—Pacific Air Forces

PPI—Plan Position Indicator

QUAL—Qualification

RNAV—Area Navigation

ROE—Rules of Engagement

RQ—Requalification

RSIP—Radar System Improvement Program

R/T—Radio/Telephone

SAR—Search and Rescue

SD—Senior Director

SID—Standard Instrument Departure

SIM—Simulator

SL—Section Lead

SOI—Signals of Interest

SPINS—Special Instructions

SQ/CC—Squadron Commander

SST—Senior Surveillance Technician

Stan/Eval—Standardization and Evaluation

TES—Test and Evaluation Squadron

TH—True Heading

TKE—Track Angle Error

TOLD—Takeoff and Landing Data

USAF—United States Air Force

VDP—Visual Descent Point

VFR—Visual Flight Rules

XTK—Cross Track Deviation

Terms

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

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

Error—Departure from standard procedures and/or performing incorrect actions.

Flight Crew—The AC, FP, CP, NAV, and FE (Less NAV for DRAGON Modified Aircraft (DMA)).

Instructor—CMR/BMC qualified aircrew member who has been trained to provide instruction in their crew position.

Major—Detracted from mission accomplishment, adversely affected use of equipment, and/or violated safety.

Minor—Did not detract from mission accomplishment, adversely affect use of equipment or violate safety.

Mission Crew—Those individuals responsible for the command, control, surveillance, and communications/electronic/management functions to include the control and monitoring of assigned aircraft, sensor management, internal and external communications management, and onboard systems management.

Omission—Leave out a required action.

Proficiency—Demonstrated ability to successfully accomplish tasked event safely and effectively.