

**BY ORDER OF THE COMMANDER
AIR COMBAT COMMAND**

**AIR COMBAT COMMAND MANUAL
11-2EA-37B, VOLUME 2**



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Flying Operations

**EA-37B AIRCREW EVALUATION
CRITERIA**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This publication implements Air Force Manual (AFMAN) 11-202, Volume 2, *Aircrew Standardization and Evaluation Program*. It establishes evaluation criterion for initial and periodic aircrew qualifications for all EA-37B COMPASS CALL crew positions. This publication applies to all Regular Air Force (RegAF) COMPASS CALL units on active duty. This publication does not apply to Air Reserve Component (ARC) or United States Space Force (USSF). This publication requires the collection and/or maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code (USC) Section 9013, *Secretary of the Air Force*. The applicable System of Record Notice (SORN) F011 AF XO A, Aviation Resource Management System (ARMS) and SORN F011 AF AFMC B, Patriot Excalibur (PEX) System Records is available at <https://pclt.defense.gov/DIRECTORATES/Privacy-and-Civil-Liberties-Directorate/Privacy/SORNs/>. Ensure that all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed of in accordance with (IAW) the Air Force Records Disposition Schedule which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Product*; route DAF Forms 847 from the field through the appropriate functional chain of command. See **paragraph 1.2** of this publication for further guidance on submitting comments and suggesting improvements. This publication may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing (WG)/unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval

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Chapter 1

GENERAL INFORMATION

1.1. General. Conduct all evaluations IAW the provisions of AFMAN 11-202V2.

1.2. Recommended Changes/Waivers. Submit recommendations for changes to this publication on DAF Form 847 IAW AFI 11-215, *Flight Manuals Program*, to Air Combat Command (ACC)/ Standardization and Evaluation Branch (ACC/A3TV), through 55th Electronic Combat Group (ECG)/Standardization and Evaluation Office (55 ECG/EGV) for review. Submit requests for changes to this publication to ACC/A3TV for approval prior to publication, IAW DAFMAN 90-161, *Publishing Processes and Procedures*. Coordinate supplements IAW Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*. Forward proposed Major Command (MAJCOM), Direct Reporting Unit (DRU) and operational theater supplements to ACC/A3TV. Submit requests for changes and subordinate supplements to OPR for approval prior to publication. Waiver authority for specific individual aircrew requirements is Air Combat Command Director of Operations (ACC/A3). Forward waiver requests to ACC/A3TV through 55 ECG/EGV. Courtesy copy waiver requests to Air Combat Command Airborne Reconnaissance Operations Branch (ACC/A3CR) representatives as appropriate. Waiver requests should utilize the DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval*.

1.3. Key Words and Definitions:

1.3.1. "Will" indicates a mandatory requirement.

1.3.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.

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

1.3.4. "Note" indicates operating procedures, techniques, etc., considered essential to emphasize.

1.3.5. See **attachment 1** for definitions of deviation, major and minor errors.

1.4. Procedures.

1.4.1. Flight examiners (FEs) will use the evaluation criteria contained in **Chapter 3** for conducting flight evaluations and **paragraph 1.6** for emergency procedure evaluations (EPEs). To ensure standardized and objective evaluations, FEs will be thoroughly familiar with the prescribed evaluation criteria.

1.4.2. The examinee or FE may fly in any seat that best enables the examiner to conduct a thorough evaluation.

1.4.3. FEs will brief the examinee(s) on the conduct, purpose and requirements of the evaluation, including evaluation criteria, prior to flight. The examinee is responsible for all mission planning.

1.4.4. FEs will thoroughly debrief/critique all aspects of the flight, including the examinee's overall rating, specific deviations, area/sub area grades assigned, and additional training required.

1.4.5. FEs will not disable equipment during flight evaluations in the aircraft, but they may deny the use of systems that do not affect safety of flight.

1.4.6. Due to the limited ability to perform required maneuvers/tasks on the aircraft, FE's should primarily administer pilot initial(INIT)/qualifications (QUAL) evaluations in the Flight Training Device (FTD) and Mission Crew Commander (MCC), Mission Crew Supervisor (MCS), Analysis Operator (ANO) and Acquisition Operator (AO) evaluations in the Compass Call Mission Crew Simulator (CCMCS).

1.4.7. FEs should administer Pilot Mission (MSN) evaluations and Airborne Maintenance Technician (AMT) MSN evaluations onboard the aircraft due to limited FTD/CCMCS capability to simulate the required profiles and task.

1.5. Grading Instructions: Standardization and performance parameters are contained in this publication.

1.5.1. The tolerances for in-flight parameters are based on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. FEs will consider cumulative deviations when determining the overall grade.

1.5.2. The grading system for most areas in this publication is a three-level system Qualified/Qualified-/Unqualified (Q/Q-/U). Areas identified as "CRITICAL" in [Table 2.1](#) through [Table 2.6](#) have a two-level system (Q/U). A critical area is defined as an area or event in which unsatisfactory performance by the examinee could result in loss of life or damage to equipment. If the examinee receives a "U" in any critical area, assign an overall Qualification Level 3 (Q-3).

1.5.3. Required areas are indicated with an "R" in [Table 2.1](#) through [Table 2.6](#) for specific evaluations. All required areas must be evaluated. FEs may evaluate any other areas observed at their discretion.

1.5.3.1. When a required area cannot be evaluated in the aircraft due to equipment malfunctions, operational requirements, scheduling restrictions, aircraft configuration or weather, that area may be evaluated by an alternate method (simulator, procedural trainer, or verbal examination). Complete the evaluation on an additional flight when, in the FEs judgment, an item cannot be adequately evaluated by an alternate method.

1.5.3.2. Document the reasons for using alternate methods and the methods used in the "Additional Comments" portion of the Air Force (AF) Form 8, *Certificate of Aircrew Qualification*.

1.5.3.3. Aircrew maintain qualification in basic crew position when receiving upgrade position evaluation. if applicable evaluation areas are evaluated on subsequent evaluations. Annotate additional qualifications maintained in Section IV of AF Form 8.

1.5.3.4. Due to the congruity and likeness of ANO/AO duties aboard the EA-37B, an MCS FE may administer an evaluation updating an examinee's qualification for the MCS, ANO, an AO qualification, regardless of evaluator's crew position identifier.

1.5.3.5. Incomplete Evaluations. If flight evaluation requirements specified in this publication are not completed, the FE will annotate the AF Form 3862, *Flight Evaluation Worksheet* with the circumstances of the incomplete evaluation. The FE must note all

discrepancies and areas not evaluated. The incomplete AF Form 3862 will be placed in Standardization/Evaluation (stan/eval) temporary AF Form 8 storage until the evaluation is complete.

1.5.3.5.1. The evaluation is incomplete if the final qualification level cannot be determined. If the examinee's performance on the flight was unqualified in any CRITICAL area, the evaluation is complete and assigned an overall Q-3.

1.5.3.5.2. The FE will debrief the portion of the evaluation he/she observed.

1.5.3.5.3. If the evaluation is incomplete, another sortie will be scheduled as soon as practical. Attempt to schedule the same evaluator to complete the evaluation.

1.5.4. The FE will compare the examinee's performance for each area with the standards provided in this publication and assign an appropriate grade. Derive the overall evaluation grade from the area grades based on a composite for the observed events and tasks IAW AFMAN 11-202V2_ACCSUP, *Aircrew Standardization and Evaluation Program*, and this publication.

1.5.4.1. FEs will use the grading criteria in this publication to determine individual area grades. FE judgment must be exercised when the wording of areas is subjective and when specific situations are not covered.

1.5.4.2. FE judgment is the determining factor in arriving at the overall grade.

1.5.4.3. The FE completing the evaluation will review AF Form 3862 and consider the grades given on prior evaluation sorties when determining final qualification level. The FE completing the evaluation will sign AF Form 3862 and the front of AF Form 8 and debrief the final portion of the evaluation. Other evaluators will use documentation guidance in AFMAN 11-202V2_ACCSUP.

1.6. Emergency Procedures Evaluation (EPE). The EPE is a ground requisite on all MSN and QUAL evaluations. Document the EPE on AF Form 3862 and AF Form 8. This evaluation will include areas commensurate with examinee's Ready Aircrew Program (RAP) training level and event qualifications.

1.6.1. The following items are required on all EPEs:

1.6.1.1. Emergency Procedures. Emergencies found within the Airplane Flight Manual (AFM) will be evaluated. **(T-3)**

1.6.1.1.1. Aircrews may conduct simulated emergencies in flight while an evaluation is in progress. Simulated emergencies conducted in flight are graded in the flight phase and do not take the place of an EPE. **(T-3)**

1.6.1.1.2. Cockpit/Crew Resource Management (CRM) and Threat & Error Management (TEM) IAW AFMAN 11-290, *Cockpit/Crew Resource Management and Threat & Error Management Program*, and AF Form 4031, *CRM/TEM Skills Criteria Training/Evaluation*. **(T-3)**

1.6.1.1.3. Unusual attitude recoveries. Pilots only. **(T-3)**

1.6.2. All instrument (INSTM)/QUAL EPEs will include the following additional items:

1.6.2.1. Abort. **(T-3)**

1.6.2.2. Aeronautical Information Manual.

1.6.2.3. AFMAN 11-202, Volume 3, *Flight Operations*, and Supplements

1.6.2.4. Unusual Attitude Recoveries (simulator only). **(T-3)**

1.6.3. All MSN EPEs will include the following items (tailor MSN evaluation scenarios to unit tasking/mission).

1.6.3.1. Weapon system operation.

1.6.3.2. Electromagnetic Attack (EA)

1.6.3.3. Evasive action/threat reaction.

1.6.3.4. Mission crew QUAL/MSN and flight crew MSN EPEs should emphasize emergencies that may occur during a mission.

1.6.4. Examinees receiving a Q3 will be placed in supervised status until recommended additional training is completed and a re-evaluation is successfully accomplished. For EPEs in which the examinee is qualified, but requires additional training, the FE is responsible for indicating whether the additional training is accomplished before the next flight. Additional training and re-evaluations will be accomplished IAW AFMAN 11-202, Volume 1, *Aircrew Training*, AFMAN 11-202V2, and applicable supplements.

1.6.5. A single EPE may be administered to fulfill the requisites for the combined MSN/INSTM/QUAL evaluation. The combined EPE must be of sufficient scope and length to ensure all required areas for each evaluation are accomplished.

1.6.6. The following grading criteria will be used to grade EPEs:

1.6.6.1. **Q.** Performance is correct. Quickly recognizes and corrects errors.

1.6.6.2. **Q-.** Performance is safe but indicates limited proficiency. Makes errors of omission or commission.

1.6.6.3. **U.** Performance is unsafe or indicates lack of knowledge or ability.

1.7. Additional Training.

1.7.1. FEs are responsible for the assignment and documentation for additional training requirements.

1.7.2. The simulator may be used at the discretion of the FE to accomplish additional training and rechecks. When using the simulator for additional training and rechecks, areas/subareas should be limited to those that can be realistically accomplished in a simulator.

1.8. Unsatisfactory Performance.

1.8.1. RQ may be accomplished on the ground or in flight, at the discretion of the FE. RQ should not be administered by an examiner other than the one who administered the original evaluation.

1.8.2. If an examinee is observed endangering the safety of flight, the FE (if qualified in the position) will assume the duties of that aircrew member. This does not mean the FE assumes the examinee's position any time unsatisfactory performance is observed. If the FE feels the

examinee can continue safely with supervision, the FE is not required to assume the examinee's duties.

1.8.3. All of the following will be documented on the squadron letter of certifications:

1.8.3.1. An evaluation resulting in flight restrictions or failed requisites FEs will, at a minimum, contact the examinee's flying squadron commander (Sq/CC), squadron director of operations (Sq/DO) or stan/eval. Sq/CC, Sq/DO will notify member's stan/eval office of the restriction.

1.8.3.2. Stan/eval will notify training, flight management and scheduling before the show time for the ECG's first flight the following day (email, such as electronic Operations Group Form 1, is sufficient notification).

1.8.4. A of the failed examination will be completed no later than 1 month following failure, or end of eligibility period, whichever occurs first. The individual will be removed from supervised status upon successful reaccomplishment of the examination.

1.8.5. Following a successful reaccomplishment, squadron stan/eval will notify their Sq/DO, flight management, training and scheduling flights that the individual is removed from supervised status and may fly without restriction. In addition, training flight will update the letter of certifications, to be validated by squadron stan/eval.

1.8.6. Descriptions of discrepancies should be more than a duplication of text in grading criteria. Ensure discrepancies clearly describe the action(s) of the examinee warranting the qualification level to enable group stan/eval (EGV) trend analysis.

1.8.7. Personnel who receive an overall Q-2 or Q-3 on an evaluation will have a detailed description of all flight restrictions on AF Form 3862 and AF Form 8.

1.9. Examinations: Required exams by evaluation type are outlined in **Table A2.1**. Evaluation Ground Requirements, in this publication.

1.9.1. Open book examinations. Derive the questions from flight manuals, governing AFIs, AFMANs and command directives. An open book examination is a requisite for QUAL and MSN evaluations. The open book QUAL exam will consist of a minimum of 50 questions; the open book MSN exam will consist of a minimum of 25 questions, at least 25% derived from tactical doctrine documents related to COMPASS CALL combat operations (i.e., Air Force Tactics, Techniques and Procedures AFTTP 3-1 EC-130H, *Tactical Employment EC-130H*: <https://usaf.dps.mil/sites/Davis-Monthan/55ecg/EGV/>

1.9.2. Closed book examinations. General knowledge, 50-question test. Test questions are derived from the applicable crew position master question file (MQF) and local procedures contained in the 150 questions database (QDB).

1.9.3. INSTM examinations. Pilots will take an instrument examination. The Instrument Refresher Course (IRC) is a ground training item and will be accomplished IAW AFMAN 11-210, *Instrument Refresher Program (IRP)*, and **paragraph 2.5.3** of this publication.

1.9.4. Examination Procedures. Prior to administering an examination, the FE will verify the publications check. Exam testing procedures and times will be determined by the examinee's respective squadron stan/eval office.

1.9.5. Any publications required for testing which are not issued to the individual will be provided by the stan/eval office via FCIF library or electronic flight bag (EFB). Individuals will not write or mark in any publication while taking any examination. Publications from which the examination questions were derived will be provided by the squadron stan/eval office.

1.9.6. EGV will maintain a local MQF derived from local publications. EGV will be the approval authority for all local MQF questions.

1.9.7. EGV will review the requisite test question banks as required, normally during the first calendar quarter or whenever there is a change in source documents.

1.9.8. Test question sources. For each examination, the aircrew examinations program manager will have a list of all referenced publications. Only publications maintained in the FCIF library will be used for test references (except instrument test). If a FE determine the contents of a publication need to be tested, coordinate with the FCIF program manager for inclusion in the FCIF library.

1.9.9. Requisite examinations will be scored on the day they are completed, recorded on the examinee's AF Form 3862 and scores will be recorded in Patriot Excalibur (PEX) to the maximum extent possible.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. For all evaluations, follow the guidelines set in AFMAN 11-202V2.

2.1.2. Required areas for flight evaluations are shown in [Table 2.1](#) through [Table 2.6](#) and for EPEs in [paragraph 1.6](#).

2.1.2.1. Areas annotated with an “R” are required items and apply to the type of evaluation being conducted.

2.1.2.2. When it is impractical or not possible to accomplish a required flight evaluation area in flight, it may be evaluated by an alternate method in order to complete the evaluation. Document the reason and type of alternate method used in the comments portion of the AF Form 8. If the FE determines the required item cannot be adequately evaluated by an alternate method, then the examinee will require an additional flight to complete the evaluation.

2.1.3. Publications Check. Accomplish publications checks according to the unit supplement to AFMAN 11-202V2 and ACC Sup.

2.1.4. Cockpit/Crew Resource Management and Threat & Error Management (CRM/TEM). IAW AFMAN 11-290, all evaluations include an assessment of CRM/TEM skills. CRM/TEM skills are integral to all phases of flight and are embedded within specific grading criteria. Therefore, no specific evaluation criteria area titled CRM/TEM exists. As all the CRM/TEM skills listed on the AF Form 4031 are evaluated in other graded areas in this publication, additional use of the AF Form 4031 is unnecessary for evaluations in the EA-37B or simulator. The stan/eval trend program can be used to measure the effectiveness of CRM/TEM training.

2.2. Requirements.

2.2.1. This volume requires completion only of those evaluations specified in this chapter or a combination thereof. Special (e.g., functional check flight) do not require INIT or periodic evaluations; annotate these certifications on the letter of certifications.

2.2.2. Mission evaluations should be as realistic as possible with a minimum of simulated events.

2.2.3. Pilot INSTM/QUAL evaluations should include approaches to airfields other than home station.

2.3. Formal Course Evaluations. Formal syllabus evaluations will be conducted IAW syllabus mission profile guidelines. Evaluation will utilize the stated profile or a mission profile developed from syllabus training objectives. Formal course guidelines may be modified, based on local operating considerations or examiner judgment to complete the evaluation.

2.4. Instructor (INSTR) Evaluations.

2.4.1. Conduct INSTR evaluations IAW AFMAN 11-202V2, and [Chapter 3](#), of this publication. Thoroughly evaluate the examinee’s instructor knowledge and ability. Pilot

INSTR evaluations may be conducted in the simulator IAW [Chapter 4](#), [Chapter 5](#), and [Chapter 6](#) of this publication.

2.4.2. Initial Instructor (INIT INSTR). The emphasis of INIT INSTR evaluations is instructor duties. Evaluations should be scheduled with a crewmember requiring training (e.g., Program flight training (PFT), Continuation training (CT) or Unqualified (UQ)). Crewmembers may use their INIT INSTR evaluation to satisfy requirements of a periodic evaluation, provided all evaluation requirements for the periodic evaluation are accomplished by the examinee (not only instructed). Mission crew INIT INSTR evaluations may be conducted in the CCMCS at the discretion of the Sq/CC.

2.4.3. Requalification (RQ) INSTR. The emphasis of all RQ INSTR evaluations is instructor duties. These evaluations may be scheduled with a crewmember requiring training (PFT, CT or UQ). Crewmembers may use their RQ INSTR evaluation to satisfy requirements of a periodic evaluation, provided all evaluation requirements for the periodic evaluation are accomplished by the examinee (not only instructed).

2.4.4. Periodic INSTR. Evaluate instructor duties on periodic evaluations for crewmembers that have completed an INIT INSTR evaluation. The emphasis of periodic INSTR evaluations is the accomplishment of all required areas for the basic duties for their respective crew position plus all instructor areas for pilot, MCC, AMT, MCS, ANO and AO evaluations. Specific area(s) are briefed by examiners in which examinees demonstrate instructional ability. These must be documented on the back of AF Form 3862 and AF Form 8. All instructor areas are evaluated. Periodic INSTR evaluations scheduled with a student are allowed, provided the instructor is evaluated performing (not instructing) all required items, and the student is able to complete their syllabus event in its entirety.

2.5. Evaluation Requirements Tables. [Table 2.1](#) through [Table 2.6](#) depict grading areas for specific crew position evaluations.

2.5.1. Complete ground phase requisites annotated in [Table A2.1](#). Complete ground requirements prior to the flight evaluation with the exception of the EPE and as required for no-notice evaluations. The Sq/CC may authorize completion of requisites after the evaluation, if completed within eligibility period. Document this authorization in the additional comments section of AF Form 8. The EPE may be given before or after the evaluation at the discretion of the FE. Stan/eval is responsible for notifying examinees of all requisites when entering their eligibility zone or when scheduled for an evaluation. FEs will ensure individuals have completed applicable requisites prior to the evaluation unless otherwise approved by Sq/CC. This does not alleviate each crewmember's responsibility to be aware of his/her evaluation requirements and expiration date. Stan/eval personnel have the authority to schedule any examinee for required requisites.

2.5.2. A publications check of all issued publications required to be carried in flight as outlined in AFMAN 11-2EA-37B, Volume 3, *EA-37B Operations Procedures* is required. Publications maintained in flyaway kits and not issued to the individual will not be checked. If any discrepancies are noted, the respective squadron stan/eval will direct the correction of any deviations of standards defined in this publication. The graded publications check will be accomplished by an FE prior to the flying phase of the evaluation and may be included in the EPE. Discrepancies will be recorded on AF Form 3862 in the ground subparagraph, Area 51 Personal/Professional Equipment/Flight Publications.

2.5.3. IRC will be accomplished IAW the timeline specified in AFMAN 11-210. Individuals must be current in IRC prior to taking the instrument test. Examinee will provide IRC dates to their respective stan/eval office from his/her individual training summary.

2.5.4. Systems refresher course (SRC) currency is a mission evaluation requirement and will be treated as a requisite for the evaluation IAW AFMAN 11-202V2 para 5.5.4.1 and **Attachment 2** of this document and will be annotated in the requisite block of the AF Form 8. Currency will be tracked in Air Resource Tool Enterprise Mission Information System (ARTEMIS) and will be readily viewable in PEX.

2.5.5. Attached flyers maintaining a qualification in the EA-37B must maintain currency, IRC or SRC respective of the crew position, and may be accomplished at any point throughout the currency window defined in ACCMAN 11-2EA-37B, Volume 1, *EA-37B Aircrew Training*, Table 4.1, not necessarily in the checkride eligibility window.

2.5.6. Evaluation ground requirements can be found in [Table A2.1](#).

Table 2.1. General Grading Areas (All Crew Positions, All Initial (INIT)/Periodic Evaluations).

Area	Note	Grading Areas	
13		Crew Coordination	R
1041		Knowledge of Directives	R
29	1	Basic Aircraft Systems Knowledge	R
30		Airmanship/Situation Awareness – CRITICAL	R
31		Safety – CRITICAL	R
32		Aircrew Discipline – CRITICAL	R
37		CRM/Threat & Error Management (TEM)	R
47		Briefings/Debriefings	R
48		Preflight	R
50		Forms/Reports/Logs	R
51		Personal/Professional Equipment/Flight Publications	R
52	1	Emergency Equipment/Procedures	R
1040	2	Communications Security/Operations Security	R
302		Use of Checklist	R
<p>Notes: 1. Grade if observed. Not required if evaluated as part of the EPE. 2. Required only for MSN evaluations</p>			

Table 2.2. Instructor Evaluation Grading Areas (all crew positions, INIT / RQ / Periodic).

Area	Notes	Grading Areas	
1036		Mission Preparation	R
33		Instructional Ability	R
47		Briefings/Debriefings/Critique	R
55		Instructor Knowledge	R
56		Demonstration of Maneuvers/Procedures	R

Table 2.3. Pilot Grading Areas.

Area	Notes	Grading Areas	INSTM/QUAL	MSN
1		Flight/Mission Planning	R	R
3		Pre-Takeoff	R	R
4		Takeoff	R	R
6		Departure	R	R
8		Enroute Navigation	R	R
12		Comm/Identification, Friend or Foe (IFF)	R	R
13		Radar Operations/Weather Avoidance/Wind Shear		
18		Descent	R	
23		Visual Flight Rules (VFR) Procedures/Patterns		
26		After Landing/Engine Shutdown	R	R
36		Automation Management	R	R
61		Holding/Procedure Turn	R	
63		Arrival Procedures (Instrument Flight Rules [IFR])	R	
64		Non-Precision Approach	R	
65	1	Precision Approach	R	
67		Missed Approach/Go-Around	R	
68		Circling/Side Step Approach	R	
70		Single Engine Approach	R	
71		39 Degree Flap Landing	R	R
72	2	0 Degree Flap Landing	R	
73	2	Single Engine Landing	R	
74	2	Single Engine Go-Around	R	

Area	Notes	Grading Areas	INSTM/QUAL	MSN
83		Tactical Employment		R
96		Defensive Maneuvering		R
151		Threat Analysis/Avoidance		R
238		Weight and Balance	R	R
295		Weapons System Orbit		R
297		Target/Threat Knowledge		R
794		Tactical Situation Monitoring		R
Notes: 1. Either a precision approach radar (PAR) or instrument landing system (ILS) approach is required to complete an INSTM/QUAL evaluation. 2. Will only be accomplished in a full motion Aircrew Training Device (ATD).				

Table 2.4. Airborne Maintenance Technician (AMT) Grading Areas.

Area	Notes	Grading Area	MSN/QUAL
6		After Takeoff/System Startup	R
8		Level Off/Cruise/Enroute	R
18		System Shutdown/Descent	R
26		After Landing/Engine Shutdown	R
29		Basic Aircraft Systems	R
59		Before Landing	R
85		Communications	R
1039		External Communications	R
736		Trouble Analysis/Corrective Action	R
737		Direction Finding (DF) Subsystem	R
775		Mission Termination	R
776		Radio Frequency Receive (RFR)	R
777		Acquisition Subsystem	R
778		System Control and Management (SCM)	R
779		Analysis Subsystem	R
780		Exciter Subsystem	R
781		Radio Frequency Transmit (RFT)	R

Area	Notes	Grading Area	MSN/QUAL
784		Human-Machine Interface	R

Table 2.5. Mission Crew Commander Grading Areas.

Area	Notes	Grading Areas	
1		Mission Planning	R
12		Communications Equipment	R
1071		Mission Equipment System Knowledge/Operations	R
83		Tactical Employment	R
85		Communications	R
96		Defensive Maneuvering	R
151		Threat Analysis/Avoidance	R
187		Post Engagement	R
227		Post flight	R
238		Weight and Balance	R
295		Weapons System Orbit	R
297		Target/Threat Knowledge	R
736		Mission Equipment System Malfunction Analysis	R
791		System Setup	R
792		Jamming Ops/Antenna Orientation/Timing	R
793		Allocation/Use of Jamming/Radiate Resources	R
794		Tactical Situation Monitoring	R
796		Mission Crew Supervision	R

Table 2.6. Mission Crew Supervisor (MCS), Analysis Operator (ANO), and Acquisition Operator (AO) Grading Areas.

Area	Notes	Grading Areas	A	B	C
1		Mission Planning	R	R	R
1071	1	Mission Equipment System Knowledge/Operation	R	R	R
85		Communications	R	R	R
12		Communications Equipment	R		
83		Tactical Employment	R		

Area	Notes	Grading Areas	A	B	C
187		Post Engagement	R	R	R
227		Post Flight	R	R	R
297		Target/Threat Knowledge	R	R	R
736		Mission Equipment System Malfunction Analysis	R	R	R
791		System Setup	R	R	R
793		Allocation/Use of Jamming/Radiate Resources	R		
794		Tactical Situation Monitoring	R		
795		Signal Environment Analysis	R	R	R
796		Mission Crew Supervision	R		
<p>Applicability: A. Mission Crew Supervisor B. Analysis Operator C. Acquisition Operator</p> <p>Notes: 1. Subareas 1071a-c are required for all evaluations.</p>					

Chapter 3

ALL EVALUATIONS

3.1. General. The grading criteria contained in this chapter apply to all crew positions and all evaluations.

3.2. Objective. The examinee satisfactorily demonstrates the ability to perform required duties safely and effectively including the operation of appropriate aircraft systems IAW applicable technical orders, instructions and directives.

3.3. Requirements. Evaluate all crewmembers on areas listed in [Table 2.1](#) and instructors on all areas listed in [Table 2.2](#).

3.4. General Grading Criteria:

3.4.1. Area 13. Crew Coordination:

3.4.1.1. **Q.** Effectively coordinated with other crewmembers during all phases of the mission. Crewmember identified, planned and executed alternative mission activity in response to in-flight contingencies in a timely manner. Communicated in a clear and effective manner. Asked for or gave constructive feedback as necessary. Actively sought other crewmember opinions and ideas. Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources to execute mission.

3.4.1.2. **Q-.** Crew coordination was minimal. Coordination was lacking with other crewmembers to the extent minor deviations or omissions caused delays, confusion and/or crew situational awareness. Unclear communication led to repetition or misunderstanding. Slow to ask for or give constructive feedback. Crewmember was slow to identify, plan or execute alternative mission activities in response to contingencies which resulted in limited mission success. Poor task prioritization and inefficient use of available resources resulted in less than optimum mission execution. Slow to recognize and request assistance when task saturated.

3.4.1.3. **U.** Severe breakdown in coordination with other crewmembers precluded mission accomplishment and/or jeopardized safety. Crew coordination was lacking to the extent that mission accomplishment was severely degraded. Failed to participate in crew decisions or withheld information that would have corrected an unsafe situation. Failed to communicate effectively. Continuous interruptions and/or conduct/attitude was detrimental to communication among crewmembers. Withheld information and failed to ask for/respond to constructive criticism. Failed to prioritize multiple tasks and did not use available resources at their disposal to manage workload.

3.4.2. Area 1041. Knowledge of Directives:

3.4.2.1. **Q.** Possessed an adequate knowledge of all applicable publications, directives, operating procedures and restrictions and where to find them in the correct publications. Understood how to apply the information correctly.

3.4.2.2. **Q-.** Possessed a limited knowledge of applicable publications, directives, operating procedures and restrictions which caused minor deviations to established

procedures. Unsure of some directives and/or had difficulty locating some information in appropriate publications.

3.4.2.3. **U.** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

3.4.3. Area 29. Basic Aircraft Systems Knowledge.

3.4.3.1. **Q.** Demonstrated or determined proper system operation. Correctly identified and located applicable system components. Correctly determined function of system. Thorough knowledge of associated system warnings/cautions/notes.

3.4.3.2. **Q-.** Minor deviations in systems operation which did not affect mission accomplishment. Made omissions or deviations in identification or location of system components. Limited knowledge of system functions required duties or applicable system warning/cautions/notes.

3.4.3.3. **U.** Improperly operated systems. Could not identify/locate system components. Could not determine function of system. Had insufficient knowledge of required duties or applicable systems warning/cautions/notes. Major errors, omissions or deviations, which adversely affected mission accomplishment.

3.4.4. Area 30. Airmanship/Situational Awareness – (CRITICAL):

3.4.4.1. **Q.** Executed the assigned mission in a timely and efficient manner. Anticipated situations which would have adversely affected the mission and corrected them. Made appropriate decisions based on available information. Recognized a loss in situational awareness in self or others and took appropriate action to regain awareness.

3.4.4.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that the mission or safety was compromised. Failed to recognize a loss of situational awareness in self or others.

3.4.5. Area 31. Safety – (CRITICAL):

3.4.5.1. **Q.** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.

3.4.5.2. **U.** Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated the aircraft in a dangerous manner that could or did result in aircraft damage.

3.4.6. Area 32. Aircrew Discipline – (CRITICAL):

3.4.6.1. **Q.** Exhibited strict flight and crew discipline. Prepared and completed mission in compliance with existing instructions and directives.

3.4.6.2. **U.** Failed to exhibit strict flight and crew discipline. Failed to comply with existing instructions and directives which could have jeopardized safety or mission success.

3.4.7. Area 37. Crew Resource Management/Threat & Error Management (TEM):

3.4.7.1. **Q.** Proactively applied appropriate/established CRM skills and TEM concepts throughout flight/mission. Ensured safe/effective mission accomplishment by identifying and handling relevant threats. Effectively addressed errors and discrepancies via the proper use of monitoring/crosschecking procedures.

3.4.7.2. **Q-.** Reactively and inconsistently or inadequately applied appropriate/established CRM skills and TEM concepts but did not allow those deficiencies to detract from mission accomplishment and/or flight safety. Unreliably and/or inadequately anticipated, identified, or mitigated relevant threats and/or own or other crewmembers' inconsequential.

3.4.7.3. **U.** Did not apply appropriate/established CRM skills and TEM concepts to ensure safe/effective mission accomplishment. Failed to anticipate, identify, or mitigate relevant threats and/or own or other crewmembers' consequential errors.

3.4.8. Area 47. Briefings/Debriefings:

3.4.8.1. Pilot and Mission Crew Commander Criteria:

3.4.8.1.1. **Q.** Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and professionally presented in a logical sequence. Covered all pertinent items. Established objectives for the mission. Presented all training events and special interest items. Effectively used available briefing aids. Concluded briefing to allow crew transport on time. Debrief recapped key points, provided constructive feedback in a nonthreatening manner and provided appropriate corrective actions. Developed and delivered an effective debrief incorporating at least one debriefing focus point. Led discussion resolving contributing factors, root causes, analysis, fixes, and lessons learned

3.4.8.1.2. **Q-.** Allowed omission of items pertinent but not critical to the mission. Events out of sequence, hard to follow some unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Limited discussion of training events or special interest items. Dwelled on nonessential items. Not fully prepared for briefing. Debrief covered key points but lacked detail, constructive feedback and/or corrective actions. Minor errors and omission in debriefing process and delivery. Limited crew interaction and mission reconstruction/data collection resulted in vague lessons learned.

3.4.8.1.3. **U.** Failed to conduct required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence; redundant throughout. Presented erroneous information that would affect safe/effective mission accomplishment. Presentation created doubts or confusion. Failed to discuss training events or special interest items. Late crew transport due to excessively long briefing. Debrief rushed, feedback provided was vague, threatening and/or incomplete. Placed blame and/or provided inappropriate corrective actions. Errors and omissions in debriefing and delivery. Did not comply with debriefing process and/or did not include crew inputs that prevented the development of lessons learned.

3.4.8.2. Mission Crew Supervisor, Analysis Operator and Acquisition Operator Criteria:

3.4.8.2.1. **Q.** Mission planning briefings were well organized, accurate and thorough. Briefings effectively organized and professionally presented in a logical sequence. Assigned task brief(s) addressed all required and requested information. Assigned order of battle briefing(s) addressed all required and requested information. Effectively used available briefing aids. Search strategy briefing was clear, concise and thorough. Provided appropriate and constructive feedback during debrief, as required.

3.4.8.2.2. **Q-.** Minor errors or omissions in mission planning briefings, but not critical to the mission. Assigned task briefing addressed some, but not all required and/or requested information. Assigned order of battle brief addressed some, but not all required and/or requested information. Briefings out of sequence, hard to follow or some unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Minor errors or omissions in search strategy brief. Any errors or omissions did not adversely affect the mission outcome. Contributions to debrief lacked focus or detail or were not constructive.

3.4.8.2.3. **U.** Mission planning briefings were marginal or nonexistent. Major errors or omissions in briefings. Assigned task briefing did not address required information. Assigned order of battle briefing did not address required information. Failed to use briefing aids. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence; redundant throughout. Failed to provide search strategy briefing or briefing was rushed, vague and/or created confusion. Errors or omissions adversely affected the mission outcome. Contributions to debrief were hostile, unrelated to the event or were not factual.

3.4.9. Area 48. Preflight:

3.4.9.1. **Q.** Completed all systems preflight/inspections IAW technical orders, checklists and instructions. Individual technique complied with established procedures.

3.4.9.2. **Q-.** Minor deviations from established systems preflight/inspection. Individual technique was safe but deviated from established procedures.

3.4.9.3. **U.** Failed to preflight critical component or could not conduct a satisfactory preflight/inspection. Individual technique was unsafe and/or caused major deviations from established procedures.

3.4.10. Area 50. Forms/Reports/Logs:

3.4.10.1. **Q.** All required forms and/or flight plans were complete, accurate, legible and accomplished on time and IAW applicable directives. Provided an accurate debrief of significant events to applicable agencies (intelligence, weather, maintenance, etc.) Complied with security procedures.

3.4.10.2. **Q-.** Minor errors on forms and/or flight plans did not affect the conduct of the flight/mission. Incorrectly or incompletely reported some information due to minor errors, omissions and/or deviations. Complied with security procedures.

3.4.10.3. **U.** Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions and/or deviations. Failed to comply with security procedures.

3.4.11. Area 51. Personal/Professional Equipment/Flight Publications:

3.4.11.1. **Q.** Had all required personal and professional equipment. Displayed thorough knowledge of care and use of equipment and contents of required publications. Required equipment inspections were current. Publications were current and properly posted.

3.4.11.2. **Q-.** Did not have all required personal/professional equipment but had all equipment essential to the mission; or had limited knowledge of use or content of required publications. Publications were posted with omissions, deviations or errors but did not jeopardize mission success or safety.

3.4.11.3. **U.** Did not have required personal/professional equipment essential for the mission. Unsatisfactory knowledge of use of equipment or content of required publications. Required equipment inspections were overdue, or equipment was unserviceable. Publications were posted with major omissions, deviations or errors which would have jeopardized mission success and/or safety.

3.4.12. Area 52. Emergency Equipment/Procedures:

3.4.12.1. **Q.** Satisfactory systems/procedural knowledge. Displayed thorough knowledge of location and use of emergency equipment. Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available aids.

3.4.12.2. **Q-.** Marginal systems/procedural knowledge. Limited knowledge of location and use of emergency equipment. Operated within prescribed limits but was slow to analyze problems or apply proper corrective actions. Did not effectively use or deviated in use of checklist and/or available aids.

3.4.12.3. **U.** Unsatisfactory systems/procedural knowledge. Displayed unsatisfactory knowledge of emergency equipment. Exceeded flight manual limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

3.4.13. Area 1040. Communications/Operations Security:

3.4.13.1. **Q.** Demonstrated thorough knowledge of communications security (COMSEC)/operations security (OPSEC) procedures and courier procedures (if applicable). Maintained positive control of classified documents and information used throughout the mission. Properly stored, handled and/or destroyed all classified equipment information generated during the mission. Practiced sound COMSEC/OPSEC during all phases of the mission.

3.4.13.2. **Q-.** Limited knowledge of COMSEC/OPSEC procedures and/or courier procedures (if applicable). Limited knowledge of proper storage, handling and destruction procedures would not have resulted in compromise of classified material and did not impact mission accomplishment.

3.4.13.3. **U.** Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents or information would have been compromised as a result of improper control by examinee. Unfamiliarity with COMSEC/OPSEC procedures had or could have had a negative impact on mission accomplishment.

3.4.14. Area 302. Use of Checklist:

3.4.14.1. **Q.** Consistently used/called for the correct checklist; gave the correct response and accomplished correct action at the appropriate time throughout the mission.

3.4.14.2. **Q-.** Checklist responses/actions were untimely and/or crewmember required continual prompting for correct responses/actions.

3.4.14.3. **U.** Used or called for incorrect checklist or consistently omitted checklist items. Unable to identify the correct checklist to use for a given situation. Omitted or did not complete checklist(s) at the appropriate time.

3.5. Instructor Grading Criteria:

3.5.1. Area 1036. Mission Preparation:

3.5.1.1. **Q.** Thoroughly reviewed student's training folder. Ascertained student's present level of training. Assisted student in pre-mission planning and allowed student time to ask for questions. Correctly prioritized training events. Outlined mission training objectives for the student.

3.5.1.2. **Q-.** Did not thoroughly review student's training folder. Impeded student pre-mission planning. Poorly prioritized training events. Training plan/scenario made poor use of time.

3.5.1.3. **U.** Did not review student's training folder. Did not ascertain student's present level of training. Did not assist student with pre-mission planning or did not allow time for questions. Did not prioritize training events. Failed to provide mission training objectives, methods and sequence of events to student.

3.5.2. Area 33. Instructional Ability:

3.5.2.1. **Q.** Demonstrated ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and instruction was accurate, effective and timely. Identified and corrected potentially unsafe maneuvers/situations. Correctly analyzed student errors.

3.5.2.2. **Q-.** Minor discrepancies and/or omissions in ability to communicate with the student. Guidance was limited in scope but did not adversely impact student progress. Planning and instruction had minor errors in accuracy, effectiveness and timeliness. Slow to identify and correct potentially unsafe maneuvers/situations. Showed limited ability to correctly analyze student errors.

3.5.2.3. **U.** Unable to effectively communicate or provide timely feedback to the student. Unable to perform, teach or assess techniques, procedures, systems use or tactics. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe maneuvers/situations in a timely manner.

3.5.3. Area 47. Briefings/Debriefings/Critique:

3.5.3.1. **Q.** Briefings were well organized, accurate and thorough. Reviewed student's present level of training and defined mission events to be performed. Demonstrated the ability during the critique to reconstruct the flight, offer mission analysis and provided guidance. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission if required.

3.5.3.2. **Q-**. Minor errors or omissions in briefings and/or critique did not affect safety or adversely affect student progress. Made minor discrepancies in reviewing the student's past performance. Showed limited ability to reconstruct the flight during critique and made minor errors in offering mission analysis. Gave guidance/feedback that was limited in scope and/or provided limited corrective actions.

3.5.3.3. **U**. Briefings were marginal or nonexistent; major errors or omissions in briefings/debriefings. Did not review student past performance. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

3.5.4. Area 55. Instructor Knowledge:

3.5.4.1. **Q**. Demonstrated a high level of knowledge of all applicable aircraft systems, techniques, procedures, missions and tactics to be performed. Possessed a high level of knowledge of all applicable publications and procedures and understood how to apply both to enhance mission accomplishment. Completed appropriate training records accurately. Comments were clear and pertinent.

3.5.4.2. **Q-**. Minor errors/deficiencies in knowledge of above areas that did not affect safety or adversely affect student progress. Minor errors or omissions in training records. Comments were incomplete or slightly unclear.

3.5.4.3. **U**. Lack of knowledge of publications or procedures seriously detracted from instructor effectiveness. Could not apply knowledge of above areas. Did not complete required forms or records. Comments were invalid, unclear or did not accurately document performance.

3.5.5. Area 56. Demonstration of Maneuvers/Procedures:

3.5.5.1. **Q**. Effectively demonstrated procedures and techniques. Provided concise, meaningful and timely inflight commentary.

3.5.5.2. **Q-**. Performed required maneuvers/procedures with minor deviations from prescribed parameters. Inflight commentary was sometimes unclear or poorly timed, interfering with student performance. Discrepancies in the above areas did not adversely affect safety or student progress.

3.5.5.3. **U**. Was unable to properly perform required maneuvers/procedures. Made major procedural errors. Did not provide inflight commentary and/or inflight commentary was incorrect or unsafe.

Chapter 4

PILOT EVALUATIONS

4.1. General. The criteria contained here and in **Chapter 3** apply to all pilot flight evaluations. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches.

Table 4.1. General Criteria.

Grade	Requirement	Criteria
Q	Altitude	+/- 200 ft
	Airspeed	+10/-5 knts (but not less than Air Minimum Control Speed (Vmca))
	Course	+/- 5 degrees/3 nautical mile (NM) (whichever is greater)
	Arc	+/- 2 NM
Q-	Altitude	+/- 300 ft
	Airspeed	+15/-5 knts (but not less than Vmca)
	Course	+/- 10 degrees/5 NM (whichever is greater)
	Arc	+/- 3 NM
U		Exceeded Q- limits

4.1.1. Pilot qualification terminology. Use the following guidance for this chapter.

4.1.1.1. “Pilot” refers to any pilot, regardless of upgrade status or additional certification.

4.1.1.2. “Aircraft Commander” (AC) encompasses all of the following for evaluation purposes:

4.1.1.2.1. Pilots who have graduated a G550 pilot-in-command (PIC) syllabus, and are qualified as ACs, including instructor pilots. **Note:** Where a distinction is necessary to refer exclusively to these pilots, use the term “Qualified Aircraft Commander.”

4.1.1.2.2. AC upgrade/crossflow students who have completed their G550 pilot initial qualification (PIQ) training syllabus and are undergoing their INIT MSN evaluation as an AC.

4.1.1.2.3. Crossflow ACs who have graduated initial qualification training (IQT) and are undergoing top-off training prior to receiving AC certification. These pilots are evaluated as ACs.

4.1.1.2.4. Pilots entered into an RQ or commander-directed requalification (CC DIR RQ) plan.

4.1.2. The baseline qualification for EA-37B pilots is as described below:

4.1.2.1. Pilots are qualified to perform INSTM/QUAL and MSN pilot duties in either seat.

4.1.2.2. New ACs and crossflow pilots receive an INIT MSN evaluation at the end of their formal training unit (FTU) training. They do not require a separate INIT INSTM/QUAL evaluation. If a periodic or RQ INSTM/QUAL is administered in conjunction with this INIT MSN, document the INSTM/QUAL and INIT MSN on separate blocks in the flight phase section of AF Form 8.

4.2. Objective. The examinee satisfactorily demonstrates the ability to perform all pilot duties safely and effectively including the operation of appropriate aircraft systems IAW applicable technical orders, directives and published procedures.

4.3. Requirements. Conduct INIT evaluations IAW applicable ACC syllabi. On periodic or RQ evaluations, INSTM/QUAL and MSN evaluations may be completed on the same sortie if the flight profile allows completion of all required areas for both evaluations.

4.3.1. Seat Position. Pilots will accomplish all evaluations in the left seat. **Exceptions:** Instructor qualified pilots may accomplish any evaluation from any seat. Pilot MSN must be conducted in the right seat.

4.3.2. AC. Designate certified ACs as AC on the flight authorization when being evaluated. Only one complete AC evaluation is accomplished per scheduled sortie. **Note:** A single evaluator pilot may evaluate one AC and one or more pilots on the same sortie.

4.3.3. INSTM/QUAL evaluations. See **Table 2.3** for required evaluation areas. INSTM and QUAL evaluations will be combined.

4.3.3.1. Do not complete an INSTM/QUAL evaluation unless, at a minimum, the following are observed: an instrument takeoff; one full low-or-high altitude instrument approach procedure (IAP); one precision approach; one non-precision approach; one landing. **Note:** One approach must be single engine, accomplished in the simulator.

4.3.3.2. INSTM/QUAL Evaluations shall be conducted in the ATD due to the inability to simulate requisite emergency procedures in flight.

4.3.4. INIT/RQ evaluations. EA-37B basic INIT/RQ and instructor upgrade evaluations conducted at other G550 training locations are valid and update the eligibility for EA-37B INSTM/QUAL evaluations as long as the specific grading areas required by this publication are evaluated by an AF evaluator and properly documented on AF Form 8.

4.3.5. MSN evaluations. See **Table 2.3** for required evaluation areas. All MSN evaluations require a COMPASS CALL mission profile in flight with at least two turns in the mission orbit and a threat reaction. Do not simulate the mission crew. Combat descents will not be performed during MSN evaluations. **(T-3)** All defensive maneuvers and weapon system employment may be verbally evaluated during the mission if appropriate to the scenario.

4.3.6. INSTR evaluations. Instructor evaluations may be accomplished in the simulator or in flight.

4.4. Grading Criteria: See **Table 2.3** for applicability to INSTM/QUAL or MSN evaluations.

4.4.1. Areas listed in **Table 2.1** — use criteria in **Chapter 3** of this publication.

4.4.2. Areas listed in **Table 2.2** — use criteria in **Chapter 3** of this publication (if applicable).

4.4.3. Area 1. Flight/Mission Planning:

4.4.3.1. **Q.** Checked all factors applicable to flight such as: weather, Notices to Airmen (NOTAMs), alternate airfields, airfield suitability, charts, etc. Developed a plan considering mission objectives and aircraft/crew capabilities. Complied with procedures prescribed by the flight manual and other applicable directives. Complied with go/no go procedures and was prepared at briefing time. Planning was adequate with no more than minor omissions, deviations or errors which did not impact planned sortie success. Correctly computed and performed fuel management procedures. Correctly computed an equal time point (ETP)/Point of No Return (PNR), when required.

4.4.3.2. **Q-.** Minor errors or omissions detracted from mission effectiveness but did not affect mission accomplishment. Limited knowledge of performance capabilities or approved operating procedures/rules. Fuel management procedures and/or ETP/PNR computed with minor mathematical errors or omissions that would not adversely affect mission accomplishment.

4.4.3.3. **U.** Major errors or omissions would have prevented a safe or effective mission. Unsatisfactory knowledge of operating data or procedures. Did not comply with go/no go procedures. Not prepared at briefing time. Fuel computations and/or ETP/PNR were not completed or contained major errors or omissions.

4.4.4. Area 3. Pre-Takeoff:

4.4.4.1. **Q.** Established and adhered to station, start engine, taxi and take-off times to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight.

4.4.4.2. **Q-.** Same as above except for minor procedural deviations that did not detract from mission effectiveness.

4.4.4.3. **U.** Failed to accurately determine readiness of aircraft for flight. Major deviations in procedure which would preclude safe mission accomplishment. Crew errors directly contributed to a late takeoff that degraded the mission or made it ineffective.

4.4.5. Area 4. Takeoff:

4.4.5.1. **Q.** Maintained smooth, positive aircraft control throughout takeoff. Performed takeoff IAW flight and performance manual procedures.

4.4.5.2. **Q-.** Minor deviations from published procedures which did not affect safety of flight. Control was somewhat rough or erratic. Hesitant in application of procedures or corrections.

4.4.5.3. **U.** Takeoff was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight and/or performance manual procedures.

4.4.6. Area 6. Departure:

4.4.6.1. **Q.** Performed departure as published/directed and complied with all restrictions or controlling agency instructions. Made all required reports. Ensured navigation aids (NAVAIDs) were properly tuned, identified, and monitored. Applied course/heading corrections promptly. Demonstrated smooth, positive aircraft control.

4.4.6.2. **Q-**. Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Some deviations in tuning, identifying, and monitoring NAVAIDs were observed. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.

4.4.6.3. **U**. Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

4.4.7. Area 8. Enroute Navigation:

4.4.7.1. **Q**. Satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured NAVAIDs were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace.

4.4.7.2. **Q-**. Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring NAVAIDs were observed. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course.

4.4.7.3. **U**. Major errors in procedures/use of navigation equipment. Did not ensure NAVAIDs were tuned, identified and monitored. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace.

4.4.8. Area 12. Comm/IFF:

4.4.8.1. **Q**. Complete knowledge of and compliance with correct Comm/IFF procedures. Transmissions were concise with proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with all communications security requirements, HAVE QUICK and secure voice equipment. Correctly authenticated communications as necessary.

4.4.8.2. **Q-**. Occasional deviations from procedures which required retransmissions or resetting codes. Slow in initiating and/or missed several required radio calls. Transmissions contained extraneous matter, were not in proper sequence or used non-standard terminology. Displayed limited knowledge of communication security requirements, HAVE QUICK and secure voice equipment. Required numerous attempts to complete authentication communications as necessary.

4.4.8.3. **U**. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment. Was unable to properly authenticate communications.

4.4.9. Area 13. Radar Operations/Weather Avoidance/Wind Shear.

4.4.9.1. **Q**. Effectively demonstrated procedures for operating weather radar. Updated weather radar/analysis throughout the mission. Highly knowledgeable of wind shear detection, procedures and use of avoidance equipment. Used all available sources to determine if and/or to what degree severe weather conditions exist. Complied with all weather separation and wind shear avoidance procedures.

4.4.9.2. **Q-**. Minor deviations observed when operating weather radar. Did not update radar/weather analysis during worsening weather conditions. Limited knowledge of wind shear detection, procedures and use of avoidance equipment.

4.4.9.3. **U**. Unable to demonstrate proper use of weather radar. Failed to update radar/weather analysis during the mission. Displayed unsatisfactory knowledge of wind shear detection, procedures and use of avoidance equipment. Failed to comply with weather separation or wind shear avoidance directives that could have jeopardized safety or mission success.

4.4.10. Area 18. Descent:

4.4.10.1. **Q**. Performed descent as directed. Complied with all restrictions. Properly set altimeters and tuned, identified and monitored all NAVAIDs.

4.4.10.2. **Q-**. Performed descent as directed with minor deviations that did not compromise mission safety. Slow to comply with controller instructions or set proper altimeter setting. Delayed tuning, identifying or monitoring proper NAVAIDs. Slow to make corrections.

4.4.10.3. **U**. Performed descent with major deviations. Failed to follow controller instructions. Failed to tune, identify, or monitor NAVAIDs or set altimeters properly. Erratic corrections were observed.

4.4.11. Area 23. VFR Procedures/Patterns:

4.4.11.1. **Q**. Adhered to published restrictions/local guidance. Performed traffic pattern and turn to final/final approach IAW flight manual procedures. Aircraft control was smooth and positive. Did not over/undershoot final approach. Constantly cleared area of intended flight.

4.4.11.1.1. Airspeed: +10/-5 knts

4.4.11.1.2. Pattern Altitude: \pm 100 ft

4.4.11.2. **Q-**. Minor deviations from published restrictions/local guidance. Performed traffic pattern and turn to final/final approach with minor deviations to procedures. Aircraft control was safe but not consistently smooth and positive. Over/undershot final approach slightly but was able to intercept a normal glide path. Adequately cleared area of intended flight.

4.4.11.2.1. Airspeed: +15/-5 knts

4.4.11.2.2. Pattern Altitude: +/- 200 ft

4.4.11.3. **U**. Major/unsafe deviations from published restrictions/local guidance. Did not perform traffic pattern and turn to final/final approach IAW technical orders, directives or published procedures. Displayed erratic aircraft control. Over/under-shot final approach by a wide margin requiring a go-around or potentially unsafe maneuvering on final. Did not clear area of intended flight. Exceeded Q- limits.

4.4.12. Area 26. After Landing/Engine Shutdown:

4.4.12.1. **Q**. Appropriate after-landing/engine shutdown checks and aircraft taxi procedures accomplished IAW published procedures.

4.4.12.2. **Q-**. Minor deviations or omissions were made to published procedures.

4.4.12.3. **U**. Appropriate after-landing/engine shutdown checks or aircraft taxi procedures were not IAW technical orders, directives or published procedures. Major deviations or omissions occurred which could have jeopardized safety.

4.4.13. Area 36. Automation Management.

4.4.13.1. **Q**. Operated the Guidance Panel and aircraft automation in a manner that promoted adherence to navigation/approach procedures. Aware of when systems should be enabled/disabled.

4.4.13.2. **Q-**. Operation of the Guidance Panel and/or aircraft automation caused minor deviations or omissions (within Q- criteria of any other graded area) which resulted or could have resulted in departure(s) from navigation/approach procedures. Slow to recognize when systems should be enabled or disabled.

4.4.13.3. **U**. Operation of the Guidance Panel and/or aircraft automation caused major deviations or omissions (within U criteria of another graded area) which resulted or could have resulted in departure(s) from navigation/approach procedures. Unaware of when systems should have been enabled/disabled.

4.4.14. Area 61. Holding/Procedure Turn:

4.4.14.1. **Q**. Performed entry and holding IAW published procedures and directives. Tuned, identified and monitored proper NAVAIDs, if required.

4.4.14.2. **Q-**. Performed entry and holding procedures with minor deviations. Delayed tuning, identifying or monitoring proper NAVAIDs.

4.4.14.3. **U**. Holding was not IAW technical orders, directives, or published procedures. Failed to tune, identify or monitor NAVAIDs, if required.

4.4.15. Area 63. Arrival Procedures (IFR):

4.4.15.1. Subarea 63a. Instrument Approach Procedure/Penetration (Initial Approach Fix to Final Approach Fix/Descent Point) **Note:** Use Area 63 criteria and the criteria below for procedure turn approaches.

4.4.15.1.1. **Q**. Performed the approach procedure/penetration as published/directed and IAW applicable directives. Tuned, identified and monitored proper NAVAIDs at the appropriate time. Complied with all restrictions. Made smooth and timely corrections.

4.4.15.1.2. **Q-**. Performed the approach procedure/penetration with minor deviations. Delayed tuning, identifying and monitoring proper NAVAIDs. Complied with all restrictions. Slow to make corrections.

4.4.15.1.3. **U**. Performed the approach procedure/penetration with major deviations. Failed to tune, identify and monitor NAVAIDs, resulting in major deviations and/or unsafe conditions. Erratic corrections. Failed to comply with restrictions.

4.4.15.2. Subarea 63b. Instrument Pattern/RADAR Vectors to Final:

4.4.15.2.1. **Q.** Performed procedures IAW applicable directives. Smooth and timely response to controller instructions.

4.4.15.2.2. **Q-.** Performed procedures with minor deviations. Slow to respond to controller instructions.

4.4.15.2.3. **U.** Performed procedures with major deviations/erratic corrections. Failed to comply with controller instructions.

4.4.16. Area 64. Non-Precision Approach:

4.4.16.1. **Q.** Approach was IAW published procedures. Used appropriate descent rate to arrive at minimum descent altitude (MDA)/Derived Decision Altitude (DDA)/Decision Altitude (DA) at or before Visual Descent Point (VDP)/ missed approach point (MAP). Position permitted a safe landing. Initiated missed approach/go-around as directed or appropriate, if planned.

4.4.16.1.1. Airspeed: +10/-5 knts indicated airspeed (KIAS)

4.4.16.1.2. Heading: Within 5 degrees airport surveillance radar (ASR)

4.4.16.1.3. Course: Within one dot deflection

4.4.16.1.4. MDA: +100/-0 ft

4.4.16.2. **Q-.** Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Slow to correct to lateral Navigation (LNAV) course prior to MDA/DDA. Position would have permitted a safe landing. Slow to respond to controller's instructions and make corrections (ASR). Initiated missed approach/go-around as directed or appropriate.

4.4.16.2.1. Airspeed: +15/-5 KIAS

4.4.16.2.2. Heading: Within 10 degrees (ASR)

4.4.16.2.3. Course: Within two dots deflection

4.4.16.2.4. MDA: +150/-50 ft

4.4.16.3. **U.** Approach not IAW flight manual, directives or published procedures. Maintained steady-state flight below the MDA. Could not land safely from approach and did not initiate missed approach/go-around when appropriate or directed. Exceeded Q-criteria.

4.4.17. Area 65. Precision Approach:

4.4.17.1. Subarea 65a. Precision Approach RADAR (PAR):

4.4.17.1.1. **Q.** Approach was IAW published procedures. Smooth and timely response to course and glide slope or controller's instructions. Complied with decision altitude. Position permitted a safe landing. Initiated missed approach at decision altitude +50/-0 ft, if planned.

4.4.17.1.1.1. Airspeed: +10/-5 KIAS

4.4.17.1.1.2. Heading: Within 5 degrees

4.4.17.1.1.3. Glide slope: Within "above/below glide slope"

- 4.4.17.1.2. **Q-** Performed approach with minor deviations. Slow to initiate procedures, follow controller's instructions or make corrections. Improper glide slope control. Position would have permitted a safe landing. Initiated missed approach at decision altitude +50/-0 ft, if applicable.
- 4.4.17.1.2.1. Airspeed: +15/-5 KIAS
 - 4.4.17.1.2.2. Heading: Within 10 degrees
 - 4.4.17.1.2.3. Glide slope: Within "well above/below glide slope"
- 4.4.17.1.3. **U.** Approach not IAW flight manual, directives or published procedures. Erratic course and glide slope control. Did not make corrections or react to controller's instructions. Did not comply with decision altitude or position would not have permitted a safe landing. Exceeded Q- criteria.
- 4.4.17.2. Subarea 65b. Instrument Landing System (ILS) Approach:
- 4.4.17.2.1. **Q.** Performed procedures as published and IAW applicable directives. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position permitted a safe landing.
- 4.4.17.2.1.1. Airspeed: +10/-5 KIAS
 - 4.4.17.2.1.2. Glide slope/Azimuth: Within one dot
- 4.4.17.2.2. **Q-** Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Position would have permitted a safe landing. Initiated missed approach at decision height +50/-0 ft, if applicable.
- 4.4.17.2.2.1. Airspeed: +15/-5 KIAS
 - 4.4.17.2.2.2. Glide slope: Within one dot low/two dots high
 - 4.4.17.2.2.3. Azimuth: Within two dots
- 4.4.17.2.3. **U.** Performed procedures with major deviations. Erratic course/glide slope corrections. Did not comply with decision height or position would not have permitted a safe landing. Exceeded Q- criteria.
- 4.4.18. Area 67. Missed Approach/Go-around:
- 4.4.18.1. **Q.** Executed missed approach IAW published procedures and restrictions. Initiated and performed go-around promptly. Complied with controller's instructions. Applied smooth control inputs. Attained and maintained a positive climb.
 - 4.4.18.2. **Q-** Executed missed approach with minor deviations to published procedures/directives. Was slow or hesitant to initiate go-around. Slow to respond to controller's instructions. Slightly over-controlled the aircraft.
 - 4.4.18.3. **U.** Did not execute missed approach IAW technical orders, directives or published procedures. Did not comply with controller's instructions. Deviations or misapplication of procedures could have led to an unsafe condition. Exceeded Q- criteria.
- 4.4.19. Area 68. Circling/Side-Step Approach:

4.4.19.1. **Q.** Properly identified aircraft category for the approach and remained within the lateral limits for that category. Complied with controller's instructions. Attained runway alignment without excessive bank angles. Did not descend from the MDA until in a position to place the aircraft on a normal glide path or execute a normal landing.

4.4.19.1.1. Airspeed: +10/-5 knts

4.4.19.1.2. Altitude: +100/-0 ft

4.4.19.2. **Q-.** Slow to comply with controller's instructions. Attained runway alignment but occasionally required excessive bank angles or maneuvering.

4.4.19.2.1. Airspeed: +15/-5 knts

4.4.19.2.2. Altitude: +150/-50 ft

4.4.19.3. **U.** Did not properly identify aircraft category or exceeded the lateral limits of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Descended from the MDA before the aircraft was in position for a normal glide path or landing. Exceeded Q- criteria.

4.4.20. Area 70. Engine-out Approach--use approach criteria for the type of approach being flown and the following:

4.4.20.1. **Q.** Performed all required procedures IAW the flight manual and associated directives. Applied smooth, positive, and coordinated control inputs. Rudder and aileron inputs were in the correct direction.

4.4.20.2. **Q-.** Errors were made that did not affect safety. Aircraft control was not consistently smooth and positive. Rudder and aileron inputs were in the correct direction with some over/under control.

4.4.20.3. **U.** Rudder and/or aileron inputs were incorrect. Failed to perform the maneuver IAW the flight manual and associated directives. Exceeded Q- criteria.

4.4.21. Area 71. 39 Percent Flap Landing. (See [paragraph 4.4.24.](#))

4.4.22. Area 72. Flaps Up Landing. (See [paragraph 4.4.24.](#))

4.4.23. Area 73. One Engine Inoperative Landing. (See [paragraph 4.4.24.](#))

4.4.24. Areas 71 through 73--use the following criteria: **Notes:** 1. The following criterion is written to generally apply to all landings. FEs apply these criteria judiciously to allow for the unique characteristics of each type of landing. Where runway configuration, arresting cable placement or flight manual limitations require an adjustment to the desired touchdown point, identify a simulated runway threshold and the grading criteria applied accordingly. For instrument approaches, the examinee utilizes a normal glide slope from either the decision height or from a point where visual acquisition of the runway environment is made. 2. Specific items to evaluate include threshold altitude/airspeed, runway alignment, flare, touchdown zone, touchdown speed and landing in a crab.

4.4.24.1. **Q.** Performed landings as published/directed IAW flight manual and met the following criteria:

4.4.24.1.1. Airspeed: +/- 5 KIAS

- 4.4.24.1.2. Touchdown Zone: 1000-2000 ft
- 4.4.24.1.3. Centerline: +/- 15 ft left or right
- 4.4.24.1.4. Performed braking/reverse thrust commensurate with landing conditions and IAW the flight manual and applicable directives
- 4.4.24.2. **Q-**. Performed landings with minor deviation to procedures as published/directed. Landed in a slight crab. Exceeded Q limits but not the following:
 - 4.4.24.2.1. Airspeed: +10/-5 KIAS
 - 4.4.24.2.2. Touchdown Zone: Threshold – 3000 ft
 - 4.4.24.2.3. Centerline: +/- 25 ft left or right
 - 4.4.24.2.4. Braking/reverse thrust not applied smoothly, nor accomplished commensurate with landing conditions; safety not jeopardized.
- 4.4.24.3. **U**. Landing not performed as published/directed. Exceeded Q- limits. Braking or reverse thrust application accomplished in an unsafe manner.
- 4.4.25. Area 74. One Engine Inoperative Go-Around—use Area 70 criteria and the following:
 - 4.4.25.1. **Q**. Performed all required procedures IAW the flight manual and associated directives. Applied smooth, positive and coordinated control inputs. Rudder and aileron inputs were in the correct direction.
 - 4.4.25.2. **Q-**. Errors were made which did not affect safety. Aircraft control was not consistently smooth and positive. Rudder and aileron inputs were in correct direction with some over/under control.
 - 4.4.25.3. **U**. Rudder and/or aileron inputs were incorrect. Failed to perform the maneuver IAW the flight manual and associated directives. Exceeded Q- limits.
- 4.4.26. Area 83. Tactical Employment.
 - 4.4.26.1. **Q**. Employed weapon system IAW directives. Made timely adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations and tasking.
 - 4.4.26.2. **Q-**. Minor errors or deviations from directives while employing weapon system but did not prevent accomplishment of the mission. Slow to make adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.
 - 4.4.26.3. **U**. Major errors or deviations from directives that prevented accomplishment of the mission. Made inadequate adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.
- 4.4.27. Area 96. Defensive Maneuvering:
 - 4.4.27.1. **Q**. Demonstrated satisfactory knowledge of defensive tactics. Made timely and appropriate inputs to crew during mission.
 - 4.4.27.2. **Q-**. Limited knowledge of defensive tactics. Minor errors in tactics selection/execution. Did not make timely inputs to crew during mission.

4.4.27.3. **U.** Knowledge of defensive tactics was unsatisfactory or unfamiliar with the appropriate tactic for a given scenario. Major errors in tactics selection would have resulted in an unsuccessful mission.

4.4.28. Area 151. Threat Analysis/Avoidance:

4.4.28.1. **Q.** Able formulate a plan of action to avoid lethal range of given threat system. Executed the proper evasive maneuver in a timely manner. Adequately analyzed and degraded all threats ensuring effective mission accomplishment. Aware of appropriate tactics to avoid threats and exposure.

4.4.28.2. **Q-.** Made minor errors in plotting and avoiding the lethal range of a given threat system. Slow to execute the proper evasive maneuver. Minor errors in threat analysis or tactics selection.

4.4.28.3. **U.** Was unable to plot a given threat. Did not avoid lethal range of given threat system. Did not execute an effective evasive maneuver. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Was not aware of appropriate tactics for specific threats or terrain.

4.4.29. Area 238. Weight and Balance.

4.4.29.1. **Q.** Had satisfactory knowledge of aircraft limitations and weight and balance directives. Completed weight and balance with only minor errors.

4.4.29.1.1. Takeoff or landing gross weights: +/- 500 lbs.

4.4.29.1.2. Percent of Mean Aerodynamic Chord (MAC): +/- 1.0 percent.

4.4.29.1.3. Aircraft gross takeoff limits: Not exceeded.

4.4.29.1.4. Center of gravity limitations: Not exceeded.

4.4.29.2. **Q-.** Limited knowledge of aircraft limitations and weight and balance directives. Satisfactorily Completed weight and balance.

4.4.29.2.1. Takeoff or landing gross weights: +/- 501 to 1,000 lbs.

4.4.29.2.2. Percent of MAC: +/- 1.1 to 1.5 percent.

4.4.29.2.3. Aircraft gross takeoff limits: Not exceeded.

4.4.29.2.4. Center of gravity limitations: Not exceeded.

4.4.29.3. **U.** Had inadequate knowledge of aircraft limitations and weight and balance directives. Failed to complete weight and balance accurately.

4.4.29.3.1. Takeoff or landing gross weights: Exceeded +/- 1,000 lbs.

4.4.29.3.2. Percent of MAC: Exceeded +/- 1.5 percent.

4.4.29.3.3. Aircraft gross takeoff limits: Exceeded.

4.4.29.3.4. Center of gravity limitations: Exceeded.

4.4.30. Area 295. Weapons System Orbit:

4.4.30.1. **Q.** Thorough knowledge of orbit procedures and applicable aircraft limitations. Timing requirements met within 1 minute. Accurately flew orbit pattern. Properly coordinated aircraft location and orbit ETAs with the applicable crew members.

4.4.30.2. **Q-.** Adequate knowledge of orbit procedures and applicable aircraft limitations. Minor deviations in the orbit pattern that did not significantly degrade mission effectiveness. Timing requirements met within 2 minutes. Minor coordination errors or omissions with the applicable crew members.

4.4.30.3. **U.** Unsatisfactory knowledge of orbit procedures and applicable aircraft limitations. Did not meet Q- criteria for time requirements. Displayed lack of coordination with applicable crew members. Unable to perform orbit pattern that jeopardized mission accomplishment. Failed to position the aircraft within planned orbit area.

4.4.31. Area 297. Target/Threat Knowledge:

4.4.31.1. **Q.** Had sufficient knowledge of the applicable theater of operations and orders of battle. Accurately described the operations, components and limitations of targeted weapon systems.

4.4.31.2. **Q-.** Limited knowledge of the theater of operations and orders of battle which degraded mission accomplishment. Minor errors in describing the operations, components and limitations of targeted weapon systems.

4.4.31.3. **U.** Knowledge of the theater of operations and orders of battle was inadequate and jeopardized mission accomplishment. Could not describe operations, components and limitations of targeted weapon systems.

4.4.32. Area 794. Tactical Situation Monitoring:

4.4.32.1. **Q.** Correlated intelligence and operations inputs that enhanced tactical awareness of the situation. Analyzed information and disseminated appropriate data in a timely manner, both internally and externally.

4.4.32.2. **Q-.** Did not correlate operations and intelligence inputs. Delayed dissemination of critical information to internal and external agencies.

4.4.32.3. **U.** Failed to remain aware of the situation that impaired mission accomplishment. Failed to pass critical data to internally and externally.

4.4.33. Area 1071. Mission Equipment System Knowledge.

4.4.33.1. **Q.** Understands required systems to obtain the desired mission results. Demonstrates sufficient knowledge of system components and limitation to accomplish all tasks defined in directives or as assigned by tasking authorities.

4.4.33.2. **Q-.** Made minor errors in understanding required systems to obtain the desired mission results. Could not identify all major systems limitations. Required extensive research during mission planning that did not significantly degrade mission effectiveness.

4.4.33.3. **U.** Failed to understand the required system to obtain desired mission results and/or know where to find the information. Displayed inadequate knowledge of system components and system limitations.

Chapter 5

AIRBORNE MAINTENANCE TECHNICIAN (AMT) EVALUATIONS

5.1. General. The criteria in this chapter and **Chapter 3** apply to all AMT flight evaluations. The CCMCS will not be used for any AMT evaluation. **(T-3)**

5.2. Objective. The examinee satisfactorily demonstrates the ability to safely and effectively perform the AMT duties within their assigned area of responsibility, including the operation of appropriate aircraft systems. These duties are performed IAW applicable manuals, instructions, and directives.

5.3. Requirements:

5.3.1. Mission/Qualification Evaluations. See **Table 2.6** for required areas (as applicable).

5.3.2. All COMPASS CALL AMT QUAL/MSN evaluations are conducted on a mission sortie. Scenarios will be based on mission crew training requirements.

5.4. Grading Criteria:

5.4.1. Areas listed in **Table 2.1** — use criteria in **Chapter 3** of this publication.

5.4.2. Areas listed in **Table 2.2** — use criteria in **Chapter 3** of this publication (if applicable).

5.4.3. Area 6. After Takeoff/System Startup:

5.4.3.1. **Q.** Conducted procedures IAW applicable checklist items and procedures. Ensured applicable mission system equipment was started properly.

5.4.3.2. **Q-.** Conducted procedures with minor errors or omissions which did not affect safety of flight. Slow to initialize mission system which did not affect mission accomplishment.

5.4.3.3. **U.** Failed to accomplish procedures or made major errors, omissions or deviations which affected or could have affected safety of flight. Failed to initialize mission system in a timely manner which negatively affected mission accomplishment.

5.4.4. Area 8. Level Off/Cruise/Enroute:

5.4.4.1. **Q.** Monitored operations of aircraft/mission systems on a frequent basis. Corrective maintenance actions were implemented in a timely manner as capabilities permitted.

5.4.4.2. **Q-.** Conducted limited/infrequent monitoring of aircraft/mission systems.

5.4.4.3. **U.** Failed to provide adequate monitoring of aircraft/mission systems.

5.4.5. Area 18. System Shutdown/Descent:

5.4.5.1. **Q.** Ensured applicable mission system equipment was shutdown properly. Performed all required duties.

5.4.5.2. **Q-.** Accomplished applicable procedures and duties with minor errors, omissions, or deviations that did not affect safety of flight or jeopardize mission accomplishment.

5.4.5.3. **U.** Major errors, omissions, or deviations during shutdown of applicable mission system equipment and other required duties adversely affecting mission accomplishment.

5.4.6. Area 26. Post Flight:

5.4.6.1. **Q.** Completed all applicable checklist items and post flight duties in a safe and timely manner. Shut off all equipment and stowed gear properly. Fully debriefed maintenance personnel.

5.4.6.2. **Q-.** Minor omissions or deviations, which did not cause equipment damage. Maintenance debrief was adequate with minor omissions.

5.4.6.3. **U.** Major omissions or deviations while completing applicable checklist items and duties. Performed improper equipment stowage or shutdown, which would result in damage to equipment, was improper. Displayed an unsafe procedure that could cause damage to aircraft or harm to personnel. Failed to stow equipment. Failed to accomplish debriefing requirements.

5.4.7. Area 59. Before Landing:

5.4.7.1. **Q.** Accomplished procedures IAW approved checklist and directives. Confirmed applicable equipment was shutdown.

5.4.7.2. **Q-.** Performed required duties with minor errors, omissions or deviations which did not affect safety of flight.

5.4.7.3. **U.** Failed to perform required checks or made major errors, omissions or deviations. Failed to visually inspect applicable aircraft systems.

5.4.8. Area 85. Communications:

5.4.8.1. **Q.** Monitored/correctly set up communication systems. Monitored/employed communication systems as necessary. Exercised proper interphone/radio procedures, using correct terminology. Knowledge/operations of communication systems was thorough. Responded to all radio calls, checklist responses and maintained awareness of all appropriate communications systems.

5.4.8.2. **Q-.** Occasionally interrupted transmissions. Displayed limited knowledge/operation of communications systems. Occasionally failed to respond to radio calls, checklist responses or used non-standard terminology.

5.4.8.3. **U.** Failed to respond to radio calls, checklist responses. Made excessive transmissions that denied interphone/radio access to other essential information. Displayed unsatisfactory knowledge of and operation of communication systems. Did not monitor communication systems or failed to employ them effectively. Created confusion which jeopardized mission accomplishment or caused excessive delays.

5.4.9. Area 736. Trouble Analysis/Corrective Action:

5.4.9.1. **Q.** Displayed adequate knowledge of system analysis and troubleshooting techniques IAW manuals, directives and local procedures. Performed logical techniques and procedures when using the computer terminal, operator keyboard, Built-in-Test (BIT), and available test equipment to confirm and evaluate primary mission equipment (PME) malfunctions. Effective in isolating and applying corrective action to PME malfunctions.

Properly applied available resources to maintain an operational system. Informed mission crew of operational limitations and apprised of system updates.

5.4.9.2. **Q-**. Displayed limited knowledge of system analysis and logical troubleshooting techniques. Displayed limited knowledge of procedures and techniques when using the computer terminal, operator keyboard, BIT, and available test equipment to confirm, diagnose and isolate PME malfunctions. Uncertain of applications of appropriate corrective action. Unfamiliar of resources that were available to maintain an operational system. Informed mission crew of system status but did not supply information in an accurate or timely manner.

5.4.9.3. **U**. Knowledge of system analysis and troubleshooting techniques was inadequate. Failed to use the computer terminal, operator keyboard, BIT and available test equipment to confirm, diagnose and isolate PME malfunctions. Unable to apply corrective action to the system malfunctions. Was unfamiliar with necessary resources to maintain an operational system. Did not inform mission crew of system limitations or system status

5.4.10. Area 775. Mission Termination:

5.4.10.1. **Q**. Accomplished mission termination procedures IAW applicable checklists and directives. Attended required mission debriefings. Provided accurate and concise mission inputs. Ensured all mission materials were given to debriefers. Returned equipment to the appropriate storage areas.

5.4.10.2. **Q-**. Accomplished mission termination procedures with minor errors, omissions or deviations. Inattentive during mission debriefings. Provided limited but accurate information. Was unsure of proper mission material accountability. Accomplished debriefing with minor, errors, omissions or deviations. Unfamiliar with equipment storage procedures when returning professional equipment to appropriate storage areas.

5.4.10.3. **U**. Accomplished mission termination procedures with major errors, omissions or deviations. Failed to attend required mission debriefings. Failed to provide accurate information. Did not return required mission materials to debriefers. Did not return equipment to appropriate storage areas.

5.4.11. Area 737. DF Subsystem. (See [paragraph 5.4.19.](#))

5.4.12. Area 776. RFR. (See [paragraph 5.4.19.](#))

5.4.13. Area 777. Acquisition Subsystem. (See [paragraph 5.4.19.](#))

5.4.14. Area 778. SCM. (See [paragraph 5.4.19.](#))

5.4.15. Area 779. Analysis Subsystem. (See [paragraph 5.4.19.](#))

5.4.16. Area 780. Exciter Subsystem. (See [paragraph 5.4.19.](#))

5.4.17. Area 781. RFT. (See [paragraph 5.4.19.](#))

5.4.18. Area 784. Human-Machine Interface. (See [paragraph 5.4.19.](#))

5.4.19. Areas 737 through 784 – use the following criteria:

5.4.19.1. **Q**. Adequate operational system knowledge. Demonstrated proper procedure to call up, use and exit the help file. Performed call up of appropriate pages applicable to

mission accomplishment and was familiar with the contents and use of these pages. Familiar with operator keyboard functions. Explained Line Replaceable Unit (LRU) interfacing and functions of operations for the applicable subsystems. Properly monitored system performance.

5.4.19.2. **Q-**. Limited operational knowledge of the applicable subsystem. Accomplished procedures to call up and exit the help file, with minor errors or omissions that did not adversely impact mission accomplishment. Unsure or hesitant when calling up appropriate pages or demonstrated a limited knowledge of the use and contents of the pages. Unfamiliar with operator keyboard functions. Limited knowledge of LRU interfacing and functional operation of each LRU within the applicable subsystems. Slow to monitor system performance during operation.

5.4.19.3. **U**. Unsatisfactory operational knowledge of the applicable subsystem. Unable to call up, use and exit the help file, with major errors or omissions that caused critical loss of mission data or adversely affecting mission accomplishment. Failed to call up appropriate pages and/or unfamiliar with the use and contents of these pages. Failed to use keyboard functions. Did not understand LRU interface or the functional operation of the applicable subsystem. Failed to monitor system performance during operation.

Chapter 6

MISSION CREW COMMANDER (MCC) EVALUATIONS

6.1. General. The criteria contained in this chapter and **Chapter 3** applies to COMPASS CALL MCC flight evaluations.

6.2. Objective. The examinee satisfactorily demonstrates the ability to perform all mission crew duties safely and effectively, including the operation of appropriate aircraft systems IAW applicable technical orders, instructions and directives.

6.3. Requirements:

6.3.1. Qualification/Mission Evaluations. See **Table 2.5** for required evaluation areas. Develop evaluation profiles by area of responsibility based on mission kit and simulator scenario availability. Threats for takeoff, on station, recovery, tactical repositioning and retrograde procedures may be input by the FE and are based on the scenario and evaluation requirements. Scenarios should incorporate sufficient threats to adequately assess the examinee's knowledge of potential enemy orders of battle and threat capabilities.

6.3.2. Conduct initial evaluations IAW applicable ACC syllabi. All other MCC evaluations may be conducted in the aircraft and/or CCMCS.

6.4. Grading Criteria:

6.4.1. Areas listed in **Table 2.1** — use criteria in **Chapter 3** of this publication.

6.4.2. Areas listed in **Table 2.2** — use criteria in **Chapter 3** of this publication (if applicable).

6.4.3. Area 1. Mission Planning

6.4.3.1. **Q.** Efficiently supervised the mission crew in analyzing the combat mission tasking. Developed a comprehensive EA plan to include counter-communication and counter-radar subsystems, and advanced capabilities as needed for successful mission accomplishment and/or at FE discretion. Extracted all information from the Air Tasking Order (ATO), Airspace Control Order (ACO), Special Instructions (SPINS) and any other applicable scenario documentation. Coordinated, prioritized and refined an effects based EA plan with support from the air and space operations center (AOC) and liaison elements. Specific mission objectives support mission profile, CC's intent and aircrew training. Incorporated required mission planning forms.

6.4.3.2. **Q-.** Supervised mission crew in analysis of the combat mission requirements and coordinated mission tasking, but with minor errors or omissions that did not degrade overall mission accomplishment. Performed minor errors or omissions in developing a plan to execute required EA to support the ATO. Mission objectives and EA planning lacked specificity required for optimal mission and training support.

6.4.3.3. **U.** Failed to correct errors or omissions while supervising the mission crew in analyzing the combat mission tasking that prevented mission accomplishment. Developed an ineffective EA plan in support the ATO. Mission objectives and EA plans did not support the CC's intent and/or training requirements.

6.4.4. Area 12. Communications Equipment:

6.4.4.1. **Q.** Knowledge of equipment and its operation was thorough. Performed system loading IAW published procedures. Checked and verified equipment for proper system operation.

6.4.4.2. **Q-.** Knowledge of equipment and its operation was limited. Minor errors or occasional deviations in correct loading or check/verification procedures. Unnecessary delays loading, checking or verifying equipment for proper operation.

6.4.4.3. **U.** Knowledge of equipment and its operation was inadequate. Induced errors or used incorrect procedures that prevented loading and use of the equipment. Failed to load, check or verify equipment for proper operation.

6.4.5. Area 1071. Mission Equipment System Knowledge/Operation.

6.4.5.1. **Q.** Manipulated required system to obtain the desired mission results. Thorough knowledge of system components, operation, and limitations to accomplish all tasks defined in directives or as assigned by tasking authorities.

6.4.5.2. **Q-.** Minor errors in manipulating required system to obtain the desired mission results. Could not identify all major system components. Assigned tasks were completed in a consistently slow or hesitant manner that did not significantly degrade mission effectiveness.

6.4.5.3. **U.** Failed to manipulate the required system to obtain desired mission results. Displayed inadequate knowledge of system components, operation, and limitations. Could not complete assigned tasks due to unsatisfactory knowledge of system operation. Task accomplishments consistently slow to the point that mission effectiveness was significantly degraded.

6.4.6. Area 83. Tactical Employment:

6.4.6.1. **Q.** Employed weapon system IAW directives. Made timely adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations and tasking.

6.4.6.2. **Q-.** Minor errors or deviations from directives while employing weapon system but did not prevent accomplishment of the mission. Slow to make adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.

6.4.6.3. **U.** Major errors or deviations from directives that prevented accomplishment of the mission. Made inadequate adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.

6.4.7. Area 85. Communications:

6.4.7.1. **Q.** Thorough knowledge of and compliance with correct communications procedures. Monitored/employed radios as necessary. Transmissions were concise and used proper terminology. Monitored all appropriate communications systems per mission tasking. Used approved COMSEC procedures and employed encryption and authentication correctly. Displayed satisfactory knowledge and use of intercommunication system.

6.4.7.2. **Q-.** Occasional deviations from correct procedures that required retransmissions. Occasionally interrupted other transmissions. Used extraneous or non-standard

terminology. Demonstrated procedural errors employing encryption and authentication. Displayed limited knowledge of COMSEC procedures. Minor deviations in configuration and use of intercommunication system.

6.4.7.3. **U.** Rarely monitored radios or failed to employ them effectively. Responsible for confusion, which jeopardized effective mission accomplishment or caused excessive delays. Major procedural errors employing encryption and authentication. Displayed inadequate knowledge of COMSEC procedures. Major deviations in configuration and use of intercommunication system.

6.4.8. Area 96. Defensive Maneuvering

6.4.8.1. **Q.** Demonstrated satisfactory knowledge of defensive systems and appropriate tactics. Made timely and tactically appropriate inputs to crew during mission.

6.4.8.2. **Q-.** Limited knowledge of defensive systems and/or appropriate tactics. Did not make timely inputs to crew during mission.

6.4.8.3. **U.** Knowledge of defensive systems was unsatisfactory. Unfamiliar with the appropriate tactic for a given scenario. Major errors in tactics selection would have resulted in an unsuccessful mission.

6.4.9. Area 187. Post-Engagement:

6.4.9.1. **Q.** Thoroughly accomplished or supervised required checks after termination of engagement. Ensured mission equipment was shut down and all loose equipment was secured before landing.

6.4.9.2. **Q-.** Accomplished or supervised required actions after termination of engagement with minor errors or deviations which did not jeopardize safety. Minor errors or omissions in ensuring mission equipment was shut down and all loose equipment was secured before landing.

6.4.9.3. **U.** Failed to successfully accomplish or supervise required actions after termination of engagement which could have jeopardized safety. Failed to shut down equipment or secure loose items before landing.

6.4.10. Area 227. Post flight:

6.4.10.1. **Q.** Thoroughly accomplished post flight duties. Shut down all equipment and stowed gear properly.

6.4.10.2. **Q-.** Minor deviations or omissions, which would not cause equipment damage.

6.4.10.3. **U.** Improperly stowed or turned off equipment which could have resulted in damage to the equipment.

6.4.11. Area 238. Weight and Balance.

6.4.11.1. **Q.** Had satisfactory knowledge of aircraft limitations and weight and balance directives.

6.4.11.2. **Q-.** Limited knowledge of aircraft limitations and weight and balance directives.

6.4.11.3. **U.** Had inadequate knowledge of aircraft limitations and weight and balance directives.

6.4.12. Area 295. Weapons System Orbit:

6.4.12.1. **Q.** Thorough knowledge of orbit procedures and associated aircraft limitations. Properly coordinated aircraft location and orbit requirements with the applicable crew members.

6.4.12.2. **Q-.** Adequate knowledge of orbit procedures and associated aircraft limitations. Minor coordination errors or omissions with the applicable crew members.

6.4.12.3. **U.** Unsatisfactory knowledge of orbit procedures and associated aircraft limitations. Displayed lack of coordination with applicable crew members. Unable to determine orbit pattern which jeopardized mission accomplishment.

6.4.13. Area 297. Target/Threat Knowledge:

6.4.13.1. **Q.** Had sufficient knowledge of the applicable theater of operations and orders of battle. Accurately described the operations, components and limitations of targeted weapon systems.

6.4.13.2. **Q-.** Limited knowledge of the theater of operations and orders of battle which degraded mission accomplishment. Minor errors in describing the operations, components and limitations of targeted weapon systems.

6.4.13.3. **U.** Knowledge of the theater of operations and orders of battle was inadequate and prevented mission accomplishment. Could not describe operations, components and limitations of targeted weapon systems.

6.4.14. Area 736. Mission Equipment System Malfunction Analysis:

6.4.14.1. **Q.** Had sufficient knowledge of work-around measures or recovery procedures for system malfunctions. Recognized and analyzed malfunction indications in a timely and applied or directed the crew/AMT to apply corrective action or recovery procedures as the tactical situation dictated.

6.4.14.2. **Q-.** Limited knowledge of work-around measures or recovery procedures for system malfunctions. Slow to recognize or analyze malfunction indications. Slow to apply corrective action or recovery procedures. Applied corrective actions/recovery procedures at a time impractical for the tactical situation.

6.4.14.3. **U.** Displayed inadequate knowledge of work-around measures or recovery procedures for system malfunctions. Failed to recognize or properly analyze malfunction indications or failed to apply corrective action or recovery procedures as needed. Untimely application of corrective actions/recovery procedures significantly degraded mission accomplishment.

6.4.15. Area 791. System Setup:

6.4.15.1. **Q.** Had complete knowledge of system operating parameters and mission data entries. Entered/checked appropriate parameters and data required for successful mission accomplishment. Completed system setup in a timely manner.

6.4.15.2. **Q-.** Limited knowledge of systems operating parameters and mission data entries. Minor errors or omissions when entering/checking parameters and data but did not deter mission accomplishment. Slow to complete system setup.

6.4.15.3. **U.** Displayed inadequate knowledge of system operating parameters and mission data entries. Major errors or omissions when entering/checking parameters and data that prevented successful mission accomplishment. Delay in system setup was detrimental to mission accomplishment.

6.4.16. Area 792. Jamming Operations/Antenna Orientation/Timing:

6.4.16.1. **Q.** Initiated jamming of required systems IAW EA plan within one minute of preplanned or scheduled window. Adjustments were made to accommodate the tactical situation, as necessary. Conducted jam look-through periods to ensure situational awareness was maintained throughout the entire window. Applicable system antennas were oriented toward the target environment prior to jam initiation and applied appropriately throughout the mission.

6.4.16.2. **Q-.** Delayed jamming of a preplanned or scheduled window for more than one minute but less than two minutes. EA adjustments were made but not optimal for the situation. Conducted limited jamming look-through periods that resulted in degraded situational awareness. Antennas momentarily oriented away from the target environment prior to the initiation of jamming or throughout the mission.

6.4.16.3. **U.** Failed to initiate jamming within two minutes of a preplanned or scheduled window. Failed to make EA adjustments when the tactical situation required a change. Failed to conduct jam look-through periods that resulted in a complete loss of situational awareness. Antennas were consistently oriented away from the target environment that resulted in an adverse impact on mission accomplishment.

6.4.17. Area 793. Allocation/Use of Jamming/Radiate Resources:

6.4.17.1. **Q.** Demonstrated thorough operational knowledge for appropriate jam management displays and evaluated system effectiveness. Used appropriate jam resources. Allocated jam resources optimally for required operations. Effectively deconflicted systems. Appropriate targets were loaded, activated and jammed as required for mission accomplishment.

6.4.17.2. **Q-.** Displayed limited knowledge of appropriate management displays and jam resources. Minor errors in system allocation that did not deter from overall operations. Minor errors or omissions when deconflicting systems that did not prevent mission accomplishment. Unnecessarily delayed activation of appropriate targets.

6.4.17.3. **U.** Demonstrated inadequate knowledge and failed to monitor jam management displays. Inadequate usage of resources. Major errors in allocation of resources that prevented mission accomplishment. Failed to deconflict systems which resulted in prevention of mission accomplishment. Failed to activate targets at the appropriate times and failed to jam appropriate targets.

6.4.18. Area 794. Tactical Situation Monitoring:

6.4.18.1. **Q.** Monitored and correlated intelligence, provided off board inputs and updated mission system data to enhance tactical air picture. Analyzed information and properly prioritized tasks based on the tactical situation. Disseminated appropriate data to crew in a timely manner to optimize search/target strategy.

6.4.18.2. **Q-**. Did not effectively monitor or correlate intelligence, off board inputs or update mission system data to improve tactical air picture. Inability to monitor and correlate data caused delays when passing critical information to crew. Inefficient task prioritization caused minor mission delays.

6.4.18.3. **U**. Failed to maintain awareness of the tactical situation. Failed to monitor or correlate intelligence, provide off board inputs or correlate mission system data. Failed to prioritize tasks that impacted mission accomplishment. Failed to pass critical information to crew.

6.4.19. Area 796. Mission Crew Supervision:

6.4.19.1. **Q**. Effectively supervised all mission crew functions to produce smooth and efficient mission accomplishment.

6.4.19.2. **Q-**. Supervised mission crew functions, but minor disorganization and management of crew degraded mission accomplishment.

6.4.19.3. **U**. Supervision of mission crew personnel was insufficient. Lack of mission crew management had major impact on mission accomplishment.

Chapter 7

MISSION CREW SUPERVISOR (MCS), ANALYSIS OPERATOR (ANO), AND ACQUISITION OPERATOR (AO) EVALUATIONS

7.1. General. The criteria contained in this chapter and [Chapter 3](#) applies to all COMPASS CALL MCS, ANO and AO flight evaluations.

7.2. Objective. The examinee satisfactorily demonstrates the ability to perform all mission crew duties safely and effectively including the operation of appropriate aircraft systems IAW applicable technical orders, instructions and directives.

7.3. Requirements:

7.3.1. Mission (MSN)/Qualification (QUAL) Evaluations. See [Table 2.6](#) for required evaluation areas. Vary evaluation profiles by area of responsibility based on mission kit and simulator scenario availability. Threats for takeoff, on station, recovery, tactical repositioning and retrograde procedures may be introduced by the FE. These scenarios will be based on evaluation requirements. Scenario should incorporate sufficient threats to adequately assess the examinee's knowledge of potential enemy orders of battle and threat capabilities. MCS/ANO/AO position identifiers are similar aircrew specialties for evaluation purposes.

7.3.1.1. Conduct initial evaluations IAW applicable ACC syllabi. All other MCS, ANO and AO evaluations may be conducted in the aircraft and/or CCMCS.

7.3.1.2. More than one mission crew position may be evaluated on a sortie provided a separate evaluator is assigned for each crew position.

7.3.1.3. Additional crewmembers are allowed to complete elements from previously incomplete evaluations, provided the primary evaluation is not impacted, without additional evaluators.

7.3.1.4. MCS evaluations should be conducted by evaluators of like crew position. Cross-crew position evaluations may be used to update MCS and ANO/AO qualifications as required. MCS evaluations should include search and targeting of signals to update ANO or AO qualification. This should be completed during phases of flight where the examinee will not be performing primary duties as the MCS. If these areas are not evaluated, ANO or AO qualification will not be updated and the examiner will annotate applicable restrictions on the AF Form 8.

7.3.1.5. When the individual upgrading to MCS is already an instructor qualified ANO/AO, instructional ability will be evaluated as an ANO/AO.

7.4. Grading Criteria:

7.4.1. Areas listed in [Table 2.1](#) — use criteria in [Chapter 3](#) of this publication.

7.4.2. Areas listed in [Table 2.2](#) — use criteria in [Chapter 3](#) of this publication (if applicable).

7.4.3. Area 1. Mission Planning:

7.4.3.1. **Q.** Checked all factors applicable to the mission. Complied with MCC/MCS directives. Demonstrated sufficient knowledge to complete mission planning in an

effective manner. Complied with directives. Demonstrated knowledge of available alternatives.

7.4.3.2. **Q-**. Checked all information required to complete mission planning but with minor errors or omissions that did not degrade mission accomplishment. Knowledge was incomplete or inaccurate but sufficient to complete mission planning. Minor deviations from directives or MCC/MCS instructions.

7.4.3.3. **U**. Omitted information during mission planning that prevented mission accomplishment. Target knowledge was insufficient to complete mission planning. Deviations in procedures resulted in incomplete/inaccurate planning.

7.4.4. Area 1071. Mission Equipment System Knowledge/Operation:

7.4.4.1. Subarea 1071a. COMPASS CALL Operating System (CCOS) Knowledge/Operations

7.4.4.1.1. **Q**. Operated system effectively. System was configured/operated according to prescribed procedures and directives. Used acceptable techniques and procedures when utilizing human-machine interface (HMI) and demonstrated thorough knowledge of applicable menu options.

7.4.4.1.2. **Q-**. Operated system in a hesitant or slow manner. Examinee made minor omissions, deviations or errors in prescribed procedures and directives and displayed limited knowledge of system menu options. Inaction or lack of knowledge did not jeopardize mission success.

7.4.4.1.3. **U**. Did not configure/operate system IAW prescribed procedures and directives. Failed to use acceptable techniques and procedures when utilizing HMI. Displayed insufficient knowledge of appropriate menu options. Made significant omissions, deviations or errors that resulted in a significant mission impact.

7.4.4.2. Subarea 1071b. DF Subsystem

7.4.4.2.1. **Q**. Appropriately demonstrated the ability to take, verify and manipulate lines of bearing (LOBs) IAW mission requirements and mission effectiveness. Examinee displayed a thorough knowledge of the emitter LOB database (ELDB) associated commands and was able to geo-locate emitters. Demonstrated a sufficient knowledge of the DF subsystem and how to effectively employ DF commands.

7.4.4.2.2. **Q-**. Had difficulty taking or verifying LOBs, manipulating LOBs or geo-locating emitters. Had limited knowledge of the DF subsystem, ELDB and how to effectively employ DF commands with minor mission impact.

7.4.4.2.3. **U**. Failed to appropriately demonstrate the ability to take, verify and manipulate LOBs. Was unable to geo-locate emitters IAW mission requirements. Displayed insufficient knowledge on the DF subsystem, ELDB and could not utilize DF commands in an effective manner. Errors or lack of knowledge did/could have resulted in a significant impact of mission accomplishment.

7.4.4.3. Subarea 1071c. Acquisition/Analysis Subsystems

7.4.4.3.1. **Q**. Demonstrated the ability to manipulate receivers and adjust system settings. Operated the panoramic display (PAN) (MCS/AO only) and effectively

manipulated analysis requests/High-Speed Alarm (HSA) readouts IAW mission requirements. Displayed adequate knowledge of Acquisition/Analysis subsystem. Demonstrated familiarity with prescribed operating parameters of Acquisition/Analysis subsystem.

7.4.4.3.2. **Q-**. Hesitated when manipulating receivers, adjusting system settings, operating the PAN display (MCS/AO only) and conducting analysis requests/HSA readouts. Manipulated system with limited proficiency that did not hinder overall mission effectiveness. Minor deviations from prescribed operating parameters.

7.4.4.3.3. **U**. Lacked knowledge/ability to manipulate receivers, adjust system settings, operate the PAN display (MCS/AO only) or conduct analysis/HSA readouts. Lacked adequate knowledge of Acquisition/Analysis subsystem which impacted mission effectiveness. Major deviations from prescribed parameters impacted mission accomplishment.

7.4.5. Area 85. Communications:

7.4.5.1. **Q**. Displayed thorough knowledge of correct communications procedures. Monitored/employed external communications as when assigned. Transmissions were concise and used proper terminology. Monitored all appropriate external communications systems. Effectively used interphone and external communications systems.

7.4.5.2. **Q-**. Occasionally deviated from correct procedures that required retransmission. Slow to monitor/respond to external communications. Occasionally interrupted other transmissions. Used extraneous or non-standard terminology. Demonstrated procedural errors employing encryption and authentication. Minor deviations in configuration and use of interphone system.

7.4.5.3. **U**. Failed to monitor external communications or failed to employ them effectively. Major procedural errors employing encryption and authentication. Major deviations in configuration and usage of interphone system.

7.4.6. Area 12. Communication Equipment:

7.4.6.1. **Q**. Complete knowledge of and compliance with correct comm procedures. Complied with and acknowledged all required instructions. Thoroughly familiar with all communications security requirements, HAVE QUICK and secure voice equipment.

7.4.6.2. **Q-**. Occasional deviations from procedures which required resetting codes. Displayed limited knowledge of communication security requirements, HAVE QUICK and secure voice equipment.

7.4.6.3. **U**. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment.

7.4.7. Area 83. Tactical Employment.

7.4.7.1. **Q**. Employed weapon system IAW directives. Made timely adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations and tasking.

7.4.7.2. **Q-**. Minor errors or deviations from directives while employing weapon system but did not prevent accomplishment of the mission. Slow to make adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.

7.4.7.3. **U**. Major errors or deviations from directives that prevented accomplishment of the mission. Made inadequate adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.

7.4.8. Area 187. Post-Engagement:

7.4.8.1. **Q**. Thoroughly accomplished and supervised required checks after termination of engagement. Ensured mission equipment was shut down and loose items and equipment were secured or stowed before landing.

7.4.8.2. **Q-**. Accomplished and supervised required actions after termination of engagement with minor errors or deviations. Performed minor errors or omissions in ensuring mission equipment was shut down and loose items and equipment were secured or stowed before landing.

7.4.8.3. **U**. Failed to successfully accomplish and supervise required actions after termination of engagement. Failed to shut down equipment or secure loose items before landing.

7.4.9. Area 227. Post flight:

7.4.9.1. **Q**. Thoroughly accomplished post flight duties. Secured classified information/equipment. Coordinated with crew to ensure any mission equipment discrepancies are addressed with maintenance. Ensured mission compartment clear of aircrew personal protection equipment (PPE) and trash.

7.4.9.2. **Q-**. Did not thoroughly accomplish post-flight duties. Caused confusion when securing classified material. Lacked knowledge of how to debrief mission system maintenance issues or provided inaccurate information to crew during maintenance debrief.

7.4.9.3. **U**. Improperly stowed or collected classified material. Failed to coordinate with crew to address any mission system maintenance issues. Left aircrew PPE/trash on aircraft after crew departed.

7.4.10. Area 297. Target/Threat Knowledge:

7.4.10.1. **Q**. Had sufficient knowledge of the applicable theater of operations and orders of battle. Accurately described the operations, components and limitations of targeted weapon systems.

7.4.10.2. **Q-**. Displayed limited knowledge of the theater of operations and orders of battle that degraded mission accomplishment. Minor errors in describing the operations, components and limitations of targeted weapon systems.

7.4.10.3. **U**. Knowledge of theater of operations and orders of battle was inadequate and prevented mission accomplishment. Could not describe operations, components and limitations of targeted weapon systems.

7.4.11. Area 736. Mission Equipment System Malfunction Analysis:

7.4.11.1. Mission Crew Supervisor Criteria:

7.4.11.1.1. **Q.** Sufficient knowledge of recovery measures and procedures to address system malfunctions. Identified malfunctions and discussed their impact to mission operations. Analyzed malfunction indications and applied or directed the crew/AMT to apply corrective action or recovery procedures.

7.4.11.1.2. **Q-.** Displayed limited knowledge recovery measures and procedures to address system malfunctions or system degradation. Slow to recognize or analyze malfunctions. Slow to apply corrective action or recovery procedures. Applied corrective actions/recovery procedures at impractical times.

7.4.11.1.3. **U.** Displayed inadequate knowledge of recovery procedures for system malfunctions. Failed to properly address malfunction indications and apply appropriate corrective action. Failed to apply corrective actions at the appropriate time that impacted mission effectiveness.

7.4.11.2. Acquisition Operator, Analysis Operator Criteria:

7.4.11.2.1. **Q.** Recognized and analyzed malfunction indications and reported malfunction to MCC/MCS in a timely manner. Recognized impact of malfunction and applied corrective actions.

7.4.11.2.2. **Q-.** Limited knowledge of work-around measures for system malfunctions. Slow to identify or report malfunction indications. Inadequate knowledge of malfunction analysis resulted in minor impact on mission accomplishment.

7.4.11.2.3. **U.** Displayed inadequate knowledge of work-around measures for system malfunctions. Failed to recognize or properly report malfunction indications. Untimely application of recognition/reporting procedures significantly degraded mission accomplishment.

7.4.12. Area 791. System Setup:

7.4.12.1. **Q.** Demonstrated knowledge of system operating parameters and mission data entries. Entered/checked appropriate parameters and data required for successful mission accomplishment. Completed system setup in a timely manner.

7.4.12.2. **Q-.** Limited knowledge of systems operating parameters and mission data entries. Omitted data when entering/checking parameters that did not deter mission accomplishment. Slow to complete system setup.

7.4.12.3. **U.** Displayed inadequate knowledge of system operating parameters and mission data entries. Major errors or omissions during entry of parameters and data that prevented successful mission accomplishment. Delay in system setup was detrimental to mission accomplishment.

7.4.13. Area 793. Allocation/Use of Jamming/Radiate Resources (MCS Only):

7.4.13.1. **Q.** Demonstrated thorough operational knowledge for appropriate jam management displays and evaluated system effectiveness. Used appropriate jam resources. Allocated jam resources optimally for required operations. Effectively deconflicted

systems. Appropriate targets were loaded, activated and jammed as required for mission accomplishment.

7.4.13.2. **Q-**. Displayed limited knowledge of appropriate management displays and jam resources. Minor errors in system allocation that did not deter from overall operations. Minor errors or omissions when deconflicting systems that did not prevent mission accomplishment. Unnecessarily delayed activation of appropriate targets.

7.4.13.3. **U**. Demonstrated inadequate knowledge and failed to monitor jam management displays. Inadequate usage of resources. Major errors in allocation of resources that prevented mission accomplishment. Failed to deconflict systems which resulted in prevention of mission accomplishment. Failed to activate targets at the appropriate times and failed to jam appropriate targets.

7.4.14. Area 794. Tactical Situation Monitoring (Mission Crew Supervisor only):

7.4.14.1. **Q**. Monitored and correlated intelligence, provided off board inputs and updated mission system data to enhance tactical air picture. Analyzed information and properly prioritized tasks based on the tactical situation. Disseminated appropriate data to crew in a timely manner to optimize search/target strategy.

7.4.14.2. **Q-**. Did not effectively monitor or correlate intelligence, off board inputs or update mission system data to improve tactical air picture. Inability to monitor and correlate data caused delays when passing critical information to crew. Inefficient task prioritization caused minor mission delays.

7.4.14.3. **U**. Failed to maintain awareness of the tactical situation. Failed to monitor or correlate intelligence, provide off board inputs or correlate mission system data. Failed to prioritize tasks that impacted mission accomplishment. Failed to pass critical information to crew.

7.4.15. Area 795. Signal Environment Analysis:

7.4.15.1. Mission Crew Supervisor (MCS) Criteria:

7.4.15.1.1. **Q**. Completed tasked echelon construction actions. Accurately and efficiently placed targeted signals in proper echelons based on prioritization and rules of engagement (ROE). Effectively used the target page to monitor the status of echelons/target signals and directed target reverification. Demonstrated sufficient knowledge about target page and associated data. Able to prioritize search/jam cycle based on information provided by the target page. Coordinated effective use of resources and accurately analyzed and targeted signals of interest.

7.4.15.1.2. **Q-**. Echelon construction did not accurately reflect mission planning documents but did not significantly degrade mission accomplishment. Slow to echelon targeted signals. Displayed difficulties using the target page to monitor the status of echelon/targets and direct reverification. Demonstrated limited knowledge regarding target page and associated data. Unable to prioritize search/jam cycle due to lack of knowledge of information provided by the target page. Inefficient usage of allocated resources.

7.4.15.1.3. **U**. Failed to construct echelon system or deviated significantly from tasked priorities. Failed to use the target page to monitor the tactical situation, re-verify targets

and signals. Insufficient knowledge regarding target page and associated data led to inability to accomplish assigned tasks. Lack of target information caused major errors which degraded effectiveness of assigned mission. Failed to echelon or analyze signals that prevented mission accomplishment.

7.4.15.2. Acquisition Operator (AO), Analysis Operator (ANO) Criteria:

7.4.15.2.1. **Q.** Employed effective signal search procedures. Accurately identified target signals. Adjusted operations/dispositioned signal IAW existing directives, MCC/MCS guidance and the tactical situation.

7.4.15.2.2. **Q-.** Occasionally demonstrated ineffective signal search procedures. Signal analysis was occasionally inaccurate or slow and impaired mission accomplishment. Minor errors in signal disposition or adjusting operations IAW existing directives, MCC/MCS guidance and the tactical situation.

7.4.15.2.3. **U.** Ineffective use of signal search procedures. Signal analysis consistently inaccurate or excessively slow that prevented mission accomplishment. Failed to disposition signals IAW existing directives, MCC/MCS guidance or the tactical situation.

7.4.16. Area 796. Mission Crew Supervision (Mission Crew Supervisor only):

7.4.16.1. **Q.** Effectively supervised all mission crew functions to produce smooth and efficient mission accomplishment.

7.4.16.2. **Q-.** Supervised mission crew functions, but complacent personnel management resulted in minor impact on mission accomplishment.

7.4.16.3. **U.** Ineffectively and insufficiently supervised mission crew personnel. Lack of crew engagement had a major impact on mission accomplishment.

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Director of Operations

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

10 USC § 9013, *Secretary of the Air Force*

ACCMAN 11-2EA-37BV1, *EA-37B Aircrew Training*, 25 March 2026

ACCMAN 11-2EA-37BV3, *EA-37B Operations Procedures*, 25 March 2026

AFI 11-215, *Flight Manuals Program*, 25 March 2019

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

AFMAN 11-202V1, *Aircrew Training*, 27 September 2019

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

AFMAN 11-202V2_ACCSUP, *Aircrew Standardization/Evaluation Program*, 19 August 2022

AFMAN 11-202V3, *Flight Operations*, 10 January 2022

AFMAN 11-210, *Instrument Refresher Program (IRP)*, 21 December 2021

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

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

AFTTP 3-1.EC-130H, *Tactical Employment EC-130H*, Sep 2025

DAFMAN 90-161, *Publishing Processes and Procedures*, 18 October 2023

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 3862, *Flight Evaluation Worksheet*

AF Form 4031, *CRM/TEM Skills Criteria Training/Evaluation*

DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval*

DAF Form 847, *Recommendation for Change of Product*

Abbreviations and Acronyms

AC—Aircraft Commander

ACC—Air Combat Command

ACCMAN—Air Combat Command Manual

ACO—Airspace Control Order

AF—Air Force

AFI—Air Force Instruction

AFM—Airplane Flight Manual
AFMAN—Air Force Manual
AFPD—Air Force Policy Directive
AFTTP—Air Force Tactics, Techniques, and Procedures
AMT—Airborne Maintenance Technician
ANG—Air National Guard
ANO—Analysis Operator
AO—Acquisition Operator
AOC—Air and Space Operations Center
ARC—Air Reserve Component
ARTEMIS—Air Resource Tool Enterprise Mission Information System
ASR—Airport Surveillance RADAR
ATD—Aircrew Training Device
ATO—Air Tasking Order
BIT—Built-In-Test
CC—Commander
CC DIR RQ—Commander Directed Requalification
CCMCS—COMPASS CALL Mission Crew Simulator
CCOS—COMPASS CALL Operating System
COMSEC—Communications Security
CRM—Cockpit/Crew Resource Management
CT—Continuation Training
DAFI—Department of the Air Force Instruction
DAFMAN—Department of the Air Force
DA—Decision Altitude
DDA—Derived Decision Altitude
DF—Direction Finding
DRU—Direct Reporting Unit
EA—Electromagnetic Attack
ECG—Electronic Combat Group
ECS—Electronic Combat Squadron
EFB—Electronic Flight Bag

EGV—Electronic Combat Group Stan/Eval Office

ELDB—Emitter Line of Bearing Database

EPE—Emergency Procedures Evaluation

ETP—Equal Time Point

FCIF—Flight Crew Information File

FE—Flight Examiner

FTD—Flight Device Trainer

ft—Feet

FTU—Formal Training Unit

HMI—Human-Machine Interface

HSA—High-Speed Alarm

IAP—Instrument Approach Procedure

IAW—In Accordance With

IFF—Identification, Friend or Foe

IFR—Instrument Flight Rules

ILS—Instrument Landing System

INIT—Initial

INSTM/QUAL—Instrument/Qualification

INSTR—Instructor

IQT—Initial Qualification Training

IRC—Instrument Refresher Course

IRP—Instrument Refresher Program

KIAS—knots Indicated Airspeed

knts—knots

lbs.—Pounds

LNAV—Lateral Navigation

LOB—Line of Bearing

LRU—Line Replaceable Unit

MAC—Mean Aerodynamic Chord

MAJCOM—Major Command

MAP—Missed Approach Point

MC—Mission Commander

MCC—Mission Crew Commander
MCS—Mission Crew Supervisor
MDA—Minimum Descent Altitude
MQF—Master Question File
MSN—Mission
NAVAID—Navigation Aid
NM—Nautical Mile
NOTAM—Notice to Airmen
OPR—Office of Primary Responsibility
OPSEC—Operations Security
PAN—Panoramic Display
PAR—Precision Approach Radar
PEX—Patriot Excalibur
PFT—Program Flight Training
PIC—Pilot-in-Command
PIQ—Pilot Initial Qualification
PME—Primary Mission Equipment
PNR—Point of No Return
PPE—Personal Protection Equipment
Q/Q-/U—Qualified/Qualified-/Unqualified
QDB—Question Database
QUAL—Qualification
RADAR—Radio Detection and Ranging
RAP—Ready Aircrew Program
RegAF—Regular Air Force
RF—Radio Frequency
RFR—Radio Frequency Receive
RFT—Radio Frequency Transmit
ROE—Rules of Engagement
RQ—Requalification
SCM—System Control and Management
SORN—System of Records Notice

SPINS—Special Instructions

stan/eval—Standards and Evaluations

SQ—Squadron

Sq/CC—Squadron Commander

Sq/DO—Squadron Director of Operations

SRC—Systems Refresher Course

TEM—Threat & Error Management

UQ—Unqualified

USC—United States Code

USSF—United States Space Force

Vmca—Air Minimum Control Speed

VDP—Visual Descent Point

VFR—Visual Flight Rules

WG—Wing

Office Symbols

ACC/A3—Air Combat Command Director Operations

ACC/A3TV—Air Combat Command Standardization and Evaluations Branch

ACC/A3CR—Air Combat Command Airborne Reconnaissance Operations Branch

55 ECG/EGV—55th Electronic Combat Group Standardization and Evaluation Office

Attachment 2

EVALUATION GROUND REQUISITES

Table A2.1. Evaluation Ground Requisites.

CREW POSITION	TYPE FLIGHT EVAL	INST M EXAM ²	OPEN BOOK	MISSION OPEN BOOK	CLOSED BOOK	SRC	EPE ¹
Pilot	MSN	NO	NO	YES	NO	N/A	YES
	INSTM/QUAL	YES	YES	NO	YES	N/A	YES
MCC	QUAL/MSN	N/A	YES	NO	YES	YES	YES
AMT	QUAL/MSN	N/A	YES	NO	YES	YES	YES
AO/ANO	QUAL/MSN	N/A	YES	NO	YES	NO	YES
MCS	QUAL/MSN	N/A	YES	NO	YES	YES	YES
ALL	INSTR ¹	N/A	NO	NO	NO	N/A	NO
FE	SPOT ¹	N/A	NO	NO	NO	N/A	NO

Notes:

1. EPE is required for all flight evaluations except SPOT and INSTR evaluations.
2. IRC will be accomplished IAW timeline outlined in AFMAN 11-210. Aircrew must be current in IRC prior to taking the instrument exam.