BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 11-2AC-130,
VOLUME 2

9 FEBRUARY 2000

Flying Operations

AC-130 AIRCREW EVALUATION CRITERIA

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

OPR: HQ AFSOC/DOVF
(Capt. Kevin A. Gordey)
Supersedes AFI 11-2AC-130V2, 1 April 1999.

Certified by: HQ USAF/XOO
(Brig Gen Michael S. Kudlacz)
Pages: 60
Distribution: F

This instruction implements AFPD 11-2, *Aircraft Rules and Procedures,* and AFPD 11-4, *Aviation Service.* It establishes the Aircrew Standardization/Evaluation (Stan/Eval) program that supports AF objectives and is applicable to all AC-130 units and Backup Aircraft Inventory (BAI) C-130E/H aircrews. This instruction is not applicable to the Air National Guard or Air Force Reserve Command.

The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. The Privacy Act System Number F011 AF XO A, Air Force Operations Resource Management Systems (AFORMS) covers required information. The authority for maintenance of AFORMS is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), DoDD 7730.57 (Aviation Career Incentive Act of 1974 and Required Annual Report, February 5, 1976, with Changes 1 and 2), and Executive Order 9497. The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Maintain and dispose of all records created by processes prescribed in this instruction IAW AFMAN 37-139, *Records Disposition Schedule.*

SUMMARY OF REVISIONS

This revision incorporates interim change (IC) 2000-1 which removes the requirement for Emergency Procedures Evaluation (EPE) as a prerequisite, deletes the requirement for an EPE on a pilot mission evaluation, clarifies the requisite requirements for evaluations, clarifies the requirement for recurring special mission evaluations for pilots and navigators, clarifies the requirement for verbally debriefing items on pilot instrument evaluations, and expands the requirements for Direct Support Operator evaluation criteria. See the last attachment of this publication for the complete IC. A bar (|) indicates revisions from the previous edition.

1. Objectives. The Aircrew Standardization and Evaluation Program is the commander's tool to validate mission readiness and the effectiveness of unit flying, to include documentation of individual aircrew member qualifications and capabilities.

1.1. General. This instruction establishes requirements for all AC-130 and BAI C-130E/H aircrew flight evaluations and outlines aircrew standardization/evaluation (stan/eval) grading criteria. Conduct all evaluations in accordance with (IAW) the provisions of Air Force Instruction (AFI) 11-202, Volume 2, *Aircrew Standardization/Evaluation Program,* and this instruction.

1.2. Applicability. This instruction applies to all AC-130 flying units and BAI C-130E/H aircrews.

1.3. Distribution. This instruction is distributed to AC-130 units through Air Force publication distribution channels. The office of primary responsibility (OPR) upon specific request and justification makes distribution outside Air Force Special Operations Command (AFSOC).

1.4. Revisions. Personnel are encouraged to submit proposed changes IAW AFI 11-215, *Flight Manuals Program (FMP)*, to applicable MAJCOM. Use AF Form 847, **Recommendation for Change of Publication**, for comments and suggested improvements.

1.5. Waivers. Submit requests for waivers to this instruction through stan/eval channels to HQ AFSOC/DOV. Post all waivers to this instruction in the individual's flight evaluation folder (FEF) behind Tab 2.

1.6. Supplements. Units are encouraged to supplement this instruction with standard evaluation profiles that best fit the unit's mission, equipment, and location. Units below MAJCOM level will forward one copy of each supplement to the HQ AFSOC/DOV for post-publication review.

1.7. Instructor Certified Events. These are events that require certification of training by an instructor or flight examiner. Document certification on the AF Form 1381, **USAF Certification of Aircrew Training**, and file in the individual's FEF behind Tab 1. The squadron commander, stan/eval assigned personnel, or the instructor completing the training will sign the AF Form 1381. Refer to AFI 11-2AC-130, Vol. 1, *AC-130 Aircrew Training*, for a current listing of instructor certified events.

1.8. Procedures. Flight examiners will use the evaluation criteria in this volume to conduct all flight and Emergency Procedures Evaluations (EPE). To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.9. Flight Examiner Role. The flight examiner should not occupy a primary crew position during evaluations to ensure the most comprehensive evaluation. However, if conditions warrant, the flight examiner may occupy a primary crew position during an evaluation.

1.9.1. Prior to the flight, the flight examiner will explain the purpose of the evaluation and how it will be conducted. The evaluatee will accomplish all mission planning. MAJCOM flight examiners (and unit flight examiners as determined locally) will be furnished a copy of necessary charts, flight logs, target folders, and any additional items they deem necessary.

1.9.2. The flight examiner will thoroughly critique all aspects of the flight. During the critique, the flight examiner will review the evaluatee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training.

1.9.3. Standards and performance parameters are contained in this instruction.

1.9.4. The evaluator will base tolerances for in-flight parameters 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. The evaluator will consider cumulative deviations when determining the overall grade.

1.9.5. All evaluations will follow the guidelines set in AFI 11-202, Volume 2. Evaluator judgment will be the determining factor in arriving at the overall grade.

2. Grading Systems.

NOTE:

Safety consciousness, boldface emergency procedures, judgment, and all instructor areas/subareas are considered critical for all crewmembers. Additionally, all emergency procedures for loadmasters are considered critical. If one of these subareas is graded U, then the overall grade for the evaluation will be Q-3.

2.1. Overall Qualification Levels:

2.1.1. Qualification Level 1 (Q-1, Qualified). The aircrew member demonstrated desired performance and knowledge of procedures, equipment and directives within tolerances. This will be awarded when no discrepancies were noted and may be awarded when discrepancies are noted if:

2.1.1.1. The discrepancies resulted in no more than a "Q-" grade being given in any area(s)/subarea(s).

2.1.1.2. In the judgment of the flight examiner, none of the discrepancies preclude awarding of an overall Qualification Level 1.

2.1.1.3. All discrepancies noted during the evaluation were cleared during the debrief of that evaluation.

2.1.1.4. Refer to the tables in section four of this instruction for basic, qualification, mission, and instructor criteria for sub-area ratings of Qualified for respective crew positions.

2.1.2. Qualification Level 2 (Q-2, Qualified). The aircrew member demonstrated the ability to perform duties safely, but:

2.1.2.1. There were one or more area(s)/subarea(s) where additional training was assigned.

2.1.2.2. In the judgment of the flight examiner, there is justification based on performance in one or several areas/subareas.

2.1.3. Qualification Level 3 (Q-3, Unqualified). The aircrew member demonstrated an unacceptable level of safety, judgment, performance or knowledge.

2.1.3.1. An overall "Q-3" can be awarded if, in the judgment of the flight examiner, there is justification based on performance in one or several areas/subareas.

2.2. Area/Subarea Grades.

2.2.1. Q (Qualified). A "Q" is the desired level of performance. The examinee demonstrated a satisfactory knowledge of all required information, performed aircrew duties within the prescribed tolerances and accomplished the assigned mission.

2.2.2. Q- (Qualified). A "Q-" indicates the examinee is qualified to perform the assigned area tasks, but requires debriefing or additional training as determined by the flight examiner. Minor deviations from established standards that did not jeopardize mission accomplishment or flight safety.

2.2.3. U (Unqualified). Assign a "U" area grade for any breach of flight discipline or deviations from prescribed procedures that adversely affected mission accomplishment or compromised flight safety.

3. Aircrew Written Examinations.

3.1. Testing. Provide examinations IAW AFI 11-202 Volume 2 and section 4 of this instruction.

3.1.1. Combined Testing. The following crew positions require a combined qualification/mission examination: navigator, fire control officer, electronic warfare officer, flight engineer, loadmaster, sensor operator, aerial gunner and direct support officer. Examinations will consist of at least 40 closed and 40 open book questions with equal emphasis on qualification and mission areas.

4. Evaluations.

NOTE:

Conduct flight evaluations using the specific crew position profiles below. Apply criteria using paragraph **4.7.** and **Table 1.** through **Table 32.**. For all mission evaluations, evaluators will ensure that the profile includes adequate events to thoroughly measure knowledge of specific employment procedures to include tactical defensive measures and current special interest items. Crew Resource Management (CRM) skills will be evaluated on all evaluations. Include the seven CRM skills areas: Mission Planning, Situational Awareness, Crew Coordination/Flight Integrity, Communication, Risk Management/Decision Making, Task Management, and Debriefing. Evaluators should reference AF Form 4031, CRM Skills Criteria Training /Evaluation, and AFI 11-290, Cockpit/Crew Resource Management Training Program, for further clarification.

4.1. Pilot Evaluations - Requirements. Pilot flight evaluations are divided into positions, types and categories as defined below. All AF Forms 8 will indicate the applicable crew position, type(s), and category(ies) of the administered evaluation.

4.1.1. Crew Positions: The crew position is either Co-pilot, Pilot, or Instructor Pilot. See AFI 11-20V2, paragraph 6.1.2.3. for further guidance.

4.1.1.1. Co-pilots: Copilots will be evaluated to the same subarea standards as pilots, except crew coordination will not include duties and responsibilities expected of an aircraft commander. These standards are outlined in **Table 2.** - **Table 6.**

4.1.1.2. Pilot: Pilots are evaluated to the specific standards outlined in **Table 2.** – **Table 6.**

4.1.1.3. Instructor: Instructor pilots must meet criteria as outlined in paragraph **4.4.** and **Table 1.** of this instruction.

4.1.2. Evaluation Types: Pilot evaluation types are: Instrument, Qualification, Mission, and Special Qualification.

NOTE:

To promote efficient use of flying resources, the recurring instrument, mission, and qualification flight evaluations may be combined. For AC-130 pilots, recurring INSTM/QUAL evaluations may be conducted in the C-130E/H.

4.1.2.1. Instrument: Instrument evaluations will include subareas listed as “General” (**Table 2.**) and “Instrument” (**Table 4.**). All initial and requalification evaluations will include an instrument evaluation. The instrument examination is a requisite (prerequisite for initial evaluations). Complete the Instrument Refresher Course (IRC) prior to taking the instrument examination.

4.1.2.2. Qualification: Qualification evaluations will include subareas under “General” (Table 2.) and “Qualification” (Table 3.). For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites; Boldface examination and EPE are also requisites. Open and Closed Book examinations or Formal School End of Course examinations, Boldface examination, and EPE are requisites for all other types of evaluations.

4.1.2.3. Mission: Mission evaluations will include subareas under “General” (Table 2.) and “Mission” (Table 5.). Open and Closed Book examinations or Formal School End of Course examinations are requisites (prerequisites for initial evaluations).

4.1.2.3.1. Initial/Requalification: Prior to being designated mission qualified, pilots must complete an initial or requalification mission evaluation. Conduct all mission evaluations on live fire/dry fire missions. Pilots must shoot a minimum of two modes of fire.

4.1.2.3.2. Recurring Mission: Complete recurring mission evaluations during their eligibility period. Conduct the evaluation on a live fire mission. Pilots must shoot a minimum of two modes of fire. Dry fire profiles are adequate for copilot evaluations. Loss of mission qualification does not affect basic or special qualification.

4.1.2.4. Special Missions. Special Missions evaluations will include subareas listed under “General” (Table 2.) and “Special” (Table 6.). Initial special mission evaluations may be conducted separately or in conjunction with the mission evaluation. A separate “flight phase” entry will be made for the specific special mission(s) evaluated. There are no requisites for special mission evaluations.

4.1.2.4.1. Low-level. Initial or requalification evaluation is required. Conduct the evaluation on a low-level and include mission planning, briefings (Aircraft Commander only), target interdiction, route study, and map reading.

4.1.2.4.2. Initial/Requalification Air Refueling Contact. Pilots must demonstrate the ability to accomplish a sustained fuel transfer. Except for breakaway, evaluate emergency procedures verbally.

4.2. Navigator/Fire Control Officer (FCO)/Electronic Warfare Officer (EWO) Evaluations.

Navigator/Fire Control Officer/Electronic Warfare Officer flight evaluations are divided into positions, types, and categories as defined below.

4.2.1. Crew Positions: The crew position is either Navigator, Fire Control Officer, Electronic Warfare Officer, or Instructor.

4.2.1.1. Navigator: Navigators are evaluated to the specific standards outlined in **Table 7.** and **Table 8.**

4.2.1.2. Fire Control Officer. FCOs are evaluated to the specific standards outlined in **Table 9.** and **Table 10.**

4.2.1.3. Electronic Warfare Officers: EWOs are evaluated to the specific standards outlined in **Table 11.** and **Table 12.**

4.2.1.4. Instructor: Instructors must meet criteria outlined in paragraph **4.4.** and **Table 1.** of this instruction.

4.2.2. Evaluation Types: Evaluation types are Qualification (Basic Proficiency), Mission, and Special Mission.

4.2.2.1. Qualification (Navigator). Qualification evaluations will include subareas listed as “Basic Proficiency” (**Table 7.**). Navigators require an initial qualification evaluation in the C-130 prior to mission or special mission qualification evaluations. Thereafter, they require a recurring qualification evaluation. Evaluations may be conducted on category II routes using

category I procedures, but category I routes are preferable. State in the comments section of the AF Form 8 whether the evaluation was flown on a category I or category II route. Navigators maintaining mission qualification require a recurring combined basic proficiency and mission evaluation as outlined below.

EXCEPTION: AC-130U navigators will accomplish qualification training in the AC-130U.

4.2.2.2. Mission: The following are requisites: Open and Closed Book examinations or Formal School End of Course, (for combined basic proficiency and mission evaluations, Boldface examination and EPE are also requisites). For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites.

4.2.2.2.1. AC-130 Navigator: Mission evaluation will include subareas listed as "Qualification" (**Table 7.**) and "Mission" (**Table 8.**). The mission evaluation is a combined basic proficiency and mission evaluation.

4.2.2.2.1.1. Initial/Requalification: Conduct initial or requalification mission evaluations on missions consisting of both live and dry fire missions. Time on target (TOT) criteria for dry fire missions is plus or minus 30 seconds to a point tangent to the orbit or as predetermined by the evaluator.

4.2.2.2.1.2. Recurring (AC-130H). Evaluation requirements are the same as for the initial mission except a live fire is desired, but not required. Verbally evaluate live fire procedures if not accomplished in-flight.

4.2.2.2.1.3. Recurring (AC-130U). Navigators require live fire procedures. Dual target attack, live offset, combat tweak, and firing of all guns is desired but not required.

4.2.2.2.2. AC-130 Fire Control Officer (FCO) Mission Evaluations. Mission evaluation will include subareas listed as "General" (**Table 9.**) and "Mission" (**Table 10.**). The mission evaluation is a combined basic proficiency and mission evaluation.

4.2.2.2.2.1. Initial/requalification. Conduct initial or requalification mission evaluations on missions consisting of both live fire and dry fire. Conduct the recurring mission evaluation in their mission eligibility period.

4.2.2.2.3. AC-130 Dual Qualified Nav/FCO Mission Evaluations. Enter a separate flight phase entry in Section II of the AF Form 8 for the navigator and fire control officer portions with the appropriate dates. For dual qualified Nav/FCO evaluations, designate the crew position in Section I as navigator.

4.2.2.2.3.1. Initial. Navigators and fire control officers already qualified in one position, and selected to maintain dual qualification, must satisfy the initial evaluation requirements for the position in which they are upgrading.

4.2.2.2.3.2. Recurring. If possible, complete a combined evaluation during their eligibility period. Evaluate equipment preflight, sensor alignment, and live-fire in the FCO position. Evaluate all other events in the navigator position. Separate evaluations are authorized if unable to complete a combined evaluation.

4.2.2.2.3.3. Requalification. Complete the initial requirements of both paragraphs **4.2.2.2.1.** and **4.2.2.2.2.** to satisfy evaluation requirements.

4.2.2.2.3.4. Performing duties. Dual-qualified navigator/FCOs may administer evaluations to unqualified navigators and unqualified FCOs simultaneously.

NOTE:

Dual qualified navigators and fire control officers unqualified in mission events in either position remain unqualified in all AC-130 missions until a requalification evaluation is successfully completed.

4.2.2.2.4. Special mission. Navigators designated to maintain low-level qualification require an initial evaluation. The evaluation may be administered in conjunction with the recurring mission evaluation

4.2.2.2.4.1. Initial and Requalification. Fly a minimum of 45 minutes terminating overhead a planned interdiction target in a firing orbit at a preplanned time of arrival. TOT criteria is plus or minus 30 seconds. TOT criteria may be evaluated based on the time of arrival at the initial point (IP) if weather does not permit climb to firing altitude.

4.2.2.2.4.1.1. Dual Qualified Navigator/FCO. Dual qualified navigator/FCOs will receive initial or requalification low-level evaluations in the navigator position. Low-level navigators who become dual qualified Nav/FCOs are qualified to perform low-level duties in the FCO position without additional instructor certification or evaluation.

4.2.2.2.5. AC-130 Electronic Warfare Officer: Mission evaluations will include all subareas listed as “General” (**Table 11.**) and “Qualification/Tactical” (**Table 12.**). The mission evaluation is a combined basic proficiency and mission evaluation. All EWOs require an initial/requalification and recurring mission evaluations. The mission length will be sufficient to allow evaluation of all applicable subareas. Mission profiles will include at least 30 minutes of Electronic Counter Measures (ECM) activity with ground radar, naval radar, or airborne interceptors.

4.3. Nonrated Aircrew Member Evaluation Requirements. All fixed-wing nonrated aircrew members require an initial qualification evaluation. Nonrated aircrew flight evaluations are divided into crew position, types and categories as defined below. All AF Forms 8 will indicate the applicable crew position, type(s), and category (ies).

4.3.1. Crew positions: Nonrated crew positions are Flight Engineer, Loadmaster, Sensor Operator, Aerial Gunner, Direct Support Operator, and Instructor.

4.3.1.1. Flight Engineer (FE): FEs are evaluated to the standards in **Table 13.-Table 18.**

4.3.1.2. Loadmaster (LM): LMs are evaluated to the standards in **Table 19.-Table 22.**

4.3.1.3. Sensor Operator (SO): SOs are evaluated to the standards in **Table 23.-Table 24.**

4.3.1.4. Aerial Gunners (AG): AGs are evaluated to the standards in **Table 25.-Table 29.**

4.3.1.5. Direct Support Operator (DSO): DSOs are evaluated to standards in **Table 30.-Table 32.**

4.3.1.6. Instructor: Instructors must meet the criteria as outlined in paragraph **4.4.** and **Table 1.** of this instruction.

4.3.1.7. Evaluator: Evaluators follow the guidance as outlined in paragraph **4.5.** of this instruction.

4.3.2. Evaluation Types: Non-rated evaluation types are Qualification (Basic Proficiency), Mission and Special Mission.

4.3.2.1. Qualification (Basic Proficiency): All non-rated aircrew members require an initial qualification evaluation. For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites; Boldface examination and EPE are also requisites. Open and Closed Book examinations or Formal School End of Course examinations, Boldface examination, and EPE are requisites for all other types of evaluations. Non-rated aircrew members maintaining mission qualification require recurring combined basic proficiency and mission evaluation.

4.3.2.2. Mission: Mission evaluations may be administered concurrently with the initial qualification evaluation. The following are requisites: Open and Closed Book examinations or Formal School End of Course, (for combined basic proficiency and mission evaluations, Boldface examination and EPE are also requisites). For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites.

4.3.2.2.1. Mission (FE):

4.3.2.2.1.1. Initial and requalification. Administer the evaluation on a live fire mission. Include as a minimum, a complete aircraft preflight, operation of aircraft systems and armament controls, and performance of other assigned duties.

4.3.2.2.1.2. Recurring. Requirements are the same as the initial evaluation, except the evaluation may be administered on a dry-fire mission.

4.3.2.2.2. Mission (LM):

4.3.2.2.2.1. Initial and Requalification. Administer the evaluation on a live fire mission to include as a minimum; a complete aircraft preflight, completion of the applicable weight and balance forms, one mission leg, hot cargo procedures, scanning, threat calls, operating defensive systems, and an aircraft postflight. Credit the evaluation if the live fire portion of the mission cancels after takeoff.

4.3.2.2.2.2. Recurring. Requirements are the same as the initial evaluation, except the evaluation may be administered on a dry fire mission.

4.3.2.2.3. Mission (SO):

4.3.2.2.3.1. Initial/Requalification: Administer the evaluation on a mission consisting of both a live and dry fire. Tweak one gun as a minimum (auto trainable tweak and two-shot drills mandatory). The dry fire portion of the mission will include close air support and armed reconnaissance with sensor guidance and/or direction.

4.3.2.2.3.2. Recurring. Requirements are the same as the initial evaluation.

4.3.2.2.3.3. Recurring Dual-Qualified Sensor Operator. Requirements are the same as in paragraph **4.3.2.2.3.2.** except, dual-qualified sensor operators may receive an evaluation from either or both seats during a recurring evaluation.

NOTE:

Dual-qualified sensor operators unqualified in mission events in either position remain unqualified in all AC-130 missions until a requalification evaluation is successfully completed.

4.3.2.2.4. Mission (AG):

4.3.2.2.4.1. Initial/Requalification. Administer the evaluation on a live fire mission. The examinee will operate all gun systems during all phases of flight from preflight to poststrike.

4.3.2.2.4.2. Recurring. Administer the evaluation on a live fire mission. The examinee will operate two gun systems during all phases of flight from preflight to poststrike.

4.3.2.2.5. Mission (DSO):

4.3.2.2.5.1. Initial/Requalification. Administer the evaluation on a mission sortie so that the examinee demonstrates knowledge and proficiency in premission planning, preflight, inflight, and post mission operations. The examinee must demonstrate proper procedures and proficiency in operating SILENT SHIELD equipment, demonstrate proper crew coordination procedures, and maintain positive control of all classified material. DSOs who accomplish requalification mission evaluations on a single airframe are recertified on all airframes on which the crewmember flies. Additional qualification for subsequent airframes will be instructor-certified events documented on the AF Form 1381.

4.3.2.2.5.2. DSO Recurring Evaluations: Administer evaluations on any mission where the examinee can demonstrate capabilities listed in the initial qualification. Recurring evaluations conducted on a single airframe will constitute recertification on all airframes on which the DSO flies.

4.4. Instructor Evaluation Requirements.

4.4.1. Instructor candidates must be qualified in all subareas they will instruct and are expected to meet the standards outlined in **Table 1.** Instructor candidates will be evaluated on instructor performance during a representative sample of maneuvers. Instructors should have a solid understanding of systems, procedures, and techniques.

4.4.2. The flight examiner should not act as student. The flight examiner may act as student during maneuvers that are considered high risk.

4.4.3. Instructor pilot candidates must demonstrate each type of landing applicable to the aircraft from the instructor position and their instructional ability during a representative sample of emergency and instrument procedures, mission maneuvers, and all special missions they will instruct. Pilots must be aircraft commander qualified in a special mission prior to an instructor qualification/certification in that mission.

4.4.4. For non-rated crewmembers, accomplish the initial instructor evaluation on a mission that permits accomplishment of all required instructor subareas.

4.4.5. Instructors will be evaluated on their ability to instruct and should be evaluated to instructor standards for a sample of maneuvers during all recurring evaluations. A student is not required and documentation is not required unless the instructor's ability is found deficient.

4.4.5.1. On recurring qualification evaluations for instructor pilots, a right seat landing will be accomplished during the evaluation.

4.4.6. A requalification instructor evaluation is required if a previously qualified instructor has been commander-directed downgraded or has not performed flying duties in the specific MDS for more than 6 months.

4.5. Flight Examiners: The evaluator crew position is a certification, not a qualification. Refer to MAJCOM supplements to AFI 11-202, Volume 2 for specific guidance.

4.5.1. Evaluators must meet the same criteria as instructors. Additionally, they must have an expert knowledge of all applicable instructions and should set exemplary standards during evaluations.

4.5.2. Evaluators will be trained and certified IAW AFI 11-202, Volume 2 (including MAJCOM supplements). Evaluators must be instructor qualified in a given event prior to acting as an evaluator in that event. Certified evaluators who subsequently add special mission instructor or other instructor qualifications are automatically certified to evaluate these new qualifications.

4.6. Multiple Qualification Evaluation Requirements . For AFSOC units, refer to AFI 11-202, Volume 2, AFSOC Supplement 1 for crew positions, evaluation requirements, and approval authority.

4.7. Verbal Evaluation of Subareas. Evaluation criteria is found in **Table 1.** through **Table 32.**. Make every effort to evaluate all subareas through actual performance. When this is not possible, evaluate the subareas verbally. The unit chief of stan/eval and the flight examiner decide if the evaluation is complete. For pilot evaluations, do not verbally evaluate takeoff, approaches (including SCAs) and landings.

4.8. Emergency Procedures Evaluations . For EPE contents, refer to applicable crewmember grading criteria in the tables in section four of this regulation. All aircrew members are responsible for understanding and applying proper emergency action procedures applicable to their crew position. EPEs may be performed in-flight, in an ATD, or verbally. The flight examiner will assign an overall EPE/ATD grade (1, 2, or 3) in the Qualification Ground Phase block of the AF Form 8, regardless whether all or a portion of the EPE was performed in-flight.

NOTE:

The following tables identify criteria for an evaluation to be considered Q-1. Refer to section two and paragraph **4.7.** of this regulation for further grading guidance.

Table 1. "Instructor" AC/C-130 Evaluation Criteria for Sub-Area Ratings of "Q".

INSTRUCTOR	CRITERIA
1. Instructional Knowledge/ Abilities	Demonstrate a complete understanding of all required publications, technical orders, and governing directives. Ensure student understands all requirements and is thoroughly prepared to perform all tasks for mission accomplishment. Demonstrate ability to thoroughly and professionally conduct required training. Explain procedures and techniques in a clear, logical manner. Review requirements/records and then accomplish required training in a professional, orderly manner IAW the syllabus of instruction. Communicate procedures and techniques in a logical, understandable format, both on the ground an in-flight. Explain why common restrictions and procedures exist. Demonstrate a thorough knowledge of tactical planning, and execution. Correctly analyze student abilities, making timely inputs as required to enhance training without adversely affecting student's accomplishment of required duties Ensure instruction does not overly restrict accomplishment of other mission requirements. Continuously evaluate the student and focus training as required. Do not allow the student to exceed aircraft or regulatory limits. Only "Q" or "U" will be awarded.
2. Demonstration of Maneuvers and Tasks	Demonstrate maneuvers or tasks consistent with criteria listed directives/instructions for a given maneuver or task. Communicate how the maneuver or task is accomplished to meet desired parameters. Only "Q" or "U" will be awarded.
3. Briefing/Critique	Communicate significant errors and outstanding accomplishments verbally and in writing (if required for training records). Provide a professional atmosphere conducive to learning. Communicate to the student the overall training sortie grade (if required) and what is expected of the student to improve Complete all required forms. Only "Q" or "U" will be awarded.
4. Forms Completion	Complete training records/evaluation forms IAW directives. Understand grading policies and procedures. Only "Q" or "U" will be awarded.

Table 2. "General" AC/C-130 Pilot Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Knowledge of Directives	Thoroughly familiar with all publications issued for the crew position plus FLIP documents. Answer any question with reference to applicable publications. Know performance limitations, warnings, operating procedures, and operational prohibitions. For mission profiles, be familiar with AFI 11-2AC-130, Vol 3.

GENERAL	**CRITERIA**
2. Mission Preparation/Planning and Briefings	Should prepare for flight with all required documentation and briefings required by AFIs. Be familiar with military and civilian NOTAM, weather, and flight plan procedures. Understand and interpret TOLD data and weight and balance information. Prepare navigation logs, charts and "frag" sheets appropriate for scheduled mission. Coordinate all mission information into concise briefings to include weather, tasking, defensive maneuvers, support missions (include air refueling information), emergency procedures, training requirements, and Risk Management Matrix review.
3. Use of checklist	Call for and execute all required checklists in accordance with T.O.s and operations instructions.
4. Safety Consciousness / Judgment	Only "Q" or "U" may be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors and evaluators should maintain situational awareness of the other pilots actions and performance. Make decisions regarding performance of tasks so as to provide best chance of efficient mission accomplishment without undue risk to aircraft or crew.
5. Crew Coordination	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand pilot intentions and requirements to effect safe, efficient mission accomplishment.
6. Communications /Authentication	Communicate using concise, professional radio discipline while ensuring all required communications are made to ATC and Command and Control agencies. Be familiar with required communications procedures for any airspace used on the mission. Understand standard ATC directions and execute them accordingly.
7. Life Support Systems	Preflight survival vest, Life Preserver Underarm (LPU), and chemical gear as required for the mission. Be familiar with survival vest contents and the operation of all components. Understand how to use the raft and LPUs operationally. Will ensure appropriate serviceable protective clothing, life support, survival, and dash 21 equipment for the entire mission are on board the aircraft.
8. Knowledge/Completion of Forms	Demonstrate working knowledge of the type and location of information contained in the aircraft forms. Insert clear, concise, and unclassified write-ups in a manner that accurately depicts the malfunctions/problems encountered during the mission. Write-ups should include mode of operation, equipment indications, and effect on equipment performance.
9. Currency of Publications	All required publications listed in AFI 11-2AC-130, Volume 3 are current and posted.

Table 3. "Qualification" AC/C-130 Pilot Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION	CRITERIA
10. Engine Start, Taxi	Perform engine start IAW T.O.s procedures. Safe taxi operations clearing obstacles by required distances. Follow standard marshaling signals.
11. Takeoff	Smooth, controlled aircraft movement. Meet parameters outlined in AFI 11-2AC-130, Vol. 3 or as briefed for specific maneuvers. Fly primarily with reference to outside view, rather than primarily instruments.
12. VFR Pattern 13. Approach and Landings 14. Go-Around (Engine-Out)	Fly IAW appropriate T.O. and AFIs.
15. After Landing/Engine Shutdown	Complete appropriate checklist(s) IAW T.O.s and AFIs.
16. Boldface Emergency Procedures	Only "Q" or "U" may be awarded. Requires reciting proper actions in correct sequence, not necessarily a verbatim response. Must be able to recognize, discuss and take to a logical conclusion selected emergency procedures (both BOLDFACE and Non-BOLDFACE emergency procedures).
17. Other Emergency Procedures	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with directives. Instructors must know required parameters for initiating maneuvers and must ensure there is no confusion between real and simulated problems.
18. System Operation / Knowledge	Can analyze facts and principles and draw conclusions about the operations of systems on the aircraft.

Table 4. "Instrument" AC/C-130 Pilot Evaluation Criteria for Sub-Area Ratings of "Q."

INSTRUMENT (Note 1)	CRITERIA
19. Instrument Departure/SID	Follow required course and maintain constant positive climb at or in excess of published climb gradient. Level at and maintain required altitude +/- 200 feet. On vectors, heading should be +/- 5 degrees. Using course guidance, should maintain +/- 5 degrees (until within 1 NM of NAVAID).
20. Enroute Navigation/Use of NAVAIDs	Maintain position awareness using available NAVAIDs and on-board equipment (AC-130U: Tactical Situation Map). Maintain safe separation from terrain and restricted airspace as required. Ensure NAVAIDs are correctly identified after tuning. Use NAVAIDs required for course guidance in accordance with directives. Navigate as required by mission and ATC directly or along published routes.
21. Descent/Holding/Arrival	Enter and execute holding IAW directives and ATC clearance. Complete appropriate checklist(s) IAW T.O.s and AFIs.
22. Precision Approach (ILS or PAR) (Note 2)	Maintain controlled, stable approach without excessive oscillations through course or glide slope. Arrive stabilized at decision height within 1 dot of course and guide slope or no more than "slightly" off PAR course and glide slope.

INSTRUMENT (Note 1)	CRITERIA
23. Non-Precision Approaches (Any two of the following: NDB, ASR/ARA/ SCA, VOR, TACAN, LOC)	Maintain controlled, stable approach without excessive oscillations through course. Arrive stabilized at minimum descent altitude within 1 dot of course or no more than "slightly" off course prior to missed approach point.
24. Circling Approach	Maintain controlled, stable approach without excessive oscillations through course. Arrive stabilized at minimum descent altitude and maintain circling airspeed or approach speed, whichever is higher.
25. Engine Out Approach	Fly IAW T.O.s and appropriate instructions.
26. Missed Approach	Execute appropriate procedures without hesitation at missed approach point or when required by ATC or directives. Immediately establish climb IAW criteria in #19 above in this table and T.O.s.
27. Weather Avoidance Procedures	Maintain airplane control IAW directives, T.O.s, and 11-2AC-130, Vol 3.

NOTES:

1. All instrument maneuvers should be performed solely by reference to instruments rather than outside visual cues. Exception: Takeoffs should transition to instruments below 100 feet, and landings should transition to outside references at approach minimums.
2. Do not evaluate a PAR as the only precision approach when the non-precision approach evaluated is the ASR, and vice-versa.

Table 5. "Mission" AC-130 Pilot Evaluation Criteria for Sub-Areas Ratings of "Q".

MISSION	CRITERIA
28. Munitions/Firing Safety (Note 1)	Pilots will be able to implement safety procedures and restrictions IAW applicable TOs, AFIs, and ROE.
29. Sensor Alignment	Coordinate with the FCO to successfully align the sensors IAW TOs and instructions.
30. Pre-Strike	Configure the aircraft for combat prior to crossing the combat-entry point IAW TOs and instructions.
31. Tweak Procedures	Coordinate with the crew to align the sensors/weapons for accurate weapons delivery IAW TOs and AFIs.
32. Geometry Analysis	Understand and make appropriate corrections to the variables which effect geometry as listed in TOs and AFIs.
33. Target Acquisition (Except Copilot)	Pilot will be able to coordinate with tactical crew to acquire the correct target/friendly position. IAW TOs, AFIs, and ROEs.
34. Gunnery (Except Copilot)	Demonstrate proficiency in two gun fire modes IAW TOs and AFIs.
35. Throttle Control (Copilot)	Maintain nominal airspeed and altitude for the correct nominals.
36. Employment Tactics (Any Two) A. Close Air Support 1. Convoy Escort 2. Urban Operations 3. Troops in Contact B. Air Interdiction 1. Targets of Opportunity/ Armed Reconnaissance 2. Preplanned C. Force Protection 1. Airbase Defense 2. Facilities Defense 3. Fighter Escort 4. Dual Target Attack (AC-130U)	Pilots will be able to reference appropriate publications, manuals, TOs, AFIs, Order of Battle, ROEs, SPINS, JTCG/ME, ATO, and coordinate with LNOs to develop a comprehensive offensive employment plan and apply it in the aircraft.
37. Threat Evasion/ Countermeasures	Pilots will be able to reference appropriate publications, multi-command manuals, TO's, AFIs, Electronic Order of Battle, ROEs, SPINS, weather, and ATO to develop a comprehensive defensive employment plan and apply it in the aircraft.
38. Tactical Systems Knowledge A. Offensive Systems B. Defensive Systems C. Fire Control/Sensors	Pilots will have an understanding of the systems and limits that effect employment IAW TOs and AFIs.
39. Tactical Recoveries (Except Copilots) A. Self-Contained Approach (AC-130U) B. Visual Recovery	Plan, brief, and fly IAW TOs and AFIs.

Note 1: Area is graded "Q" or "U."

Table 6. "Special Quals" AC-130 Pilot Evaluation Criteria for Sub-Areas Rating of "Q".

AC-130 SPECIAL MISSION	CRITERIA
40. Air Refueling a. Procedures b. Rendezvous c. Closure d. Contact/Fuel Transfer e. Breakaway f. Right Seat Refueling (CP, IAC, FEAC)	Maintain 10 minutes of contact time with no more than two inadvertent disconnects after initial contact. Perform air refueling IAW TOs and AFIs.
41. Low Level Operations a. Low Level Fixed Altitude (500/3) b. Map Reading c. Terrain/Threat Avoidance d. Emergency Procedures e. Weapons Employment	Fly low level IAW TOs and AFIs.

Table 7. "Qualification" AC/C-130 Navigator Evaluation Criteria for Sub-Area Ratings of "Q".

BASIC PROFICIENCY	CRITERIA
1. Professional Equipment	Ensure all professional equipment is carried IAW 11-2AC-130, Volume 3 and is properly preflighted prior to departing for the aircraft.
2. Mission/Flight/Fuel Planning	Coordinate all applicable mission information with the necessary crewmembers in a timely manner. Complete all required flight and fuel planning IAW 11-2AC-130 Volume 3, chapter 11.
3. Chart Preparation/Usage	Prepare charts IAW 11-2AC-130 Volume 3, chapter 11, and appropriate employment chapters.
4. Knowledge of Directives	Be thoroughly familiar with policies and procedures contained in issued publications and T.O.s. Know performance limitations, warnings, operating procedures, operational prohibitions, and local/theater directives. For mission profiles, be thoroughly familiar with all applicable employment publications.
5. Currency of Publications	All required publications listed in AFI 11-2AC-130 Volume 3 are current and posted.
6. Knowledge of FLIP	Thoroughly familiar with all FLIP publications, both classified and unclassified.
7. Use of Checklist	Execute all required checklists in accordance with T.O.s and operating instructions. Checklist accomplishment will be measured against the expanded T.O.s and AFI 11-2AC130, Vol 3 checklists.
8. Navigation Equipment Preflight	Perform required equipment checks IAW T.Os.
9. Life Support	Properly preflight all life support equipment as required for the mission being performed. Understand use of all installed emergency equipment.

BASIC PROFICIENCY	CRITERIA
10. Crew Coordination	Maintain situational awareness of, and react appropriately to, crew inputs. Communicate with crew so they understand intentions and requirements to effect safe, efficient mission accomplishment.
11. Departure/Approach Monitoring	Immediately after takeoff, cross-check available flight instruments with the airborne radar to ensure the aircraft remains clear of obstructions. Comply with requirements of 11-2AC-130 Volume 3.
12. Use of Flight Instruments	Crosscheck all available instruments to ensure the aircraft remains clear of obstructions.
13. Flight Records 14. Dead Reckoning 15. Plotting	Comply with 11-2AC-130 Volume 3 for completing all required forms and procedures for mission accomplishment. DR and plotting requirements are at the discretion of the flight examiner.
16. ETA/Course Tolerance	Do not exceed applicable tolerances as specified in FLIP/host nation directives for the type of airspace being flown.
17. Fuel Management	Comply with AFI 11-2AC130 Volume 3, Chapter 11 for completing all required forms and procedures for mission accomplishment.
18. Deviation/TAS Check	Comply with 11-2AC-130 Volume 3, Chapter 11 for completing all required forms and procedures for mission accomplishment. Properly perform inflight check if required by the mission/equipment configuration.
19. Pacing	Manage navigation duties in a manner that allows maintenance of situational awareness.
20. Navigation Computers	Properly input all required data for the mission being flown. Utilize computers IAW T.O.s and AFI 11-2AC130, Vol 3, to accomplish mission tasks while complying with ATC and operational airspace restrictions.
21. Pressure Pattern	Required for AC-130U only. Comply with AFI 11-2AC-130 Vol 3.
22. Celestial	If required by specific aircraft qualification, comply with AFI 11-2AC-130, Volume 3, Ch. 11 requirements for forms completion and inflight procedures.
23. Communication/Radio Usage	Communicate using concise, professional radio discipline while ensuring all required communications are made to ATC and command and control agencies. Demonstrate proper radio terminology, discipline, and procedures.
24. Radar (Weather and Navigation)	Demonstrate thorough knowledge of radar system operation. Operate radar IAW proper T.O. procedures.
25. Degraded Systems	Demonstrate ability to react to loss of specific systems before and during flight. Know operations restrictions associated with degraded systems.
26. Defensive Systems	Demonstrate thorough knowledge of aircraft defensive systems operated by the navigator, to include operating procedures, capabilities, limitations and restrictions.

BASIC PROFICIENCY	CRITERIA
27. Air Refueling-Receiver	Complete premission and inflight receiver duties IAW the appropriate T.O.s and AFI 11-2AC130, Vol 3, Chapter 8. Properly complete refueling portion of fuel planning as applicable to the mission.
28. Knowledge of Emergency Procedures	Demonstrate a complete knowledge on the number, location, and use of emergency equipment. Demonstrate ability to recognize an emergency situation, take the appropriate action, and properly execute procedures IAW directives.
29. Post Flight	Complete appropriate checklist(s) IAW appropriate T.O.s. Ensure AFTO 781 write-ups are accomplished as required.
30. Reports/Briefing/ Debriefing	Complete all required forms, briefs, and debriefs IAW AFI 11-2AC130, Vol 3.
31. SCNS Procedures (C-130E/H only)	Properly input all required data for the mission being flown. Utilize computers IAW T.O.s and AFI 11-2AC130, Vol 3, to accomplish mission tasks while complying with ATC and operational airspace restrictions. Be able to update systems as applicable to the specific aircraft.
32. Judgment	Only "Q" or "U" will be awarded. Make decisions regarding performance of tasks so as to provide best chance of mission accomplishment without undue risk to aircraft or crew.

Table 8. "Mission" AC-130 Navigator Evaluation Criteria for Sub-Area Ratings of "Q".

MISSION	CRITERIA
33. Sensor Alignment	Demonstrate an understanding, and perform (if required) an alignment.
34. Briefings	Give complete, concise briefings IAW AFI 11-2AC130, Vol 3, to include departure, enroute, employment area and recovery actions for the mission.
35. Fire Control Displays	Demonstrate a knowledge of how the Fire Control incorporates into the solution. AC-130U: Demonstrate how Dual Target Attack function works.
36. Low Level Navigation and Procedures (if observed)	Perform low level duties IAW AFI 11-2AC130, Vol 3, in a manner which allows for safe and effective mission accomplishment. Demonstrate alternative methods of low level as required by flight examiner.
37. Local Restrictions	Demonstrate a knowledge of local ranges/aerodrome procedures.
38. Defensive Tactics	Demonstrate thorough knowledge of aircraft specific threat avoidance/defense. Demonstrate proper navigator response to inflight threats as encountered.
39. Employment Tactics A. Close Air Support 1. Convoy Escort 2. Urban Operations 3. Troops in Contact B. Air Interdiction 1. Targets of Opportunity/ Armed Reconnaissance 2. Preplanned C. Force Protection 1. Airbase Defense 2. Facilities Defense 3. Fighter Escort 4. Dual Target Attack (AC-130U)	Navigators will be able to reference appropriate publications, manuals, TOs, AFIs, Order of Battle, ROEs, SPINS, JTCG/ME, ATO, and coordinate with LNOs and the crew to develop a comprehensive offensive employment plan and apply it in the aircraft. Demonstrate the ability to conduct pre-planned/on-call CAS, air interdiction and force protection measures.
40. TOT/TOA	Only "Q" or "U" will be awarded. Criteria is +/- 30 seconds to a point tangent to the orbit or as predetermined by the evaluator. If air refueling is observed, TOT for AR is +/- 60 seconds.
41. Degraded Systems	Demonstrate ability to react to loss of specific systems before and during flight. Know operations restrictions associated with degraded systems. Be able to properly recommend continuation or termination of mission.
42. Target Acquisition/Confirmation	Demonstrate ability to accurately identify targets and analyze aircraft position based on these targets. Be able to use sensors and update systems as applicable to the specific aircraft.
43. Strike Radar (AC-130U)	Demonstrate an ability to locate and confirm targets using the radar. Demonstrate how Beacon/Ground Moving Target Indicator functions work. Perform live fire operations using 11-2AC-130 Vol 2 criteria.

MISSION	CRITERIA
44. ARA/AILA Procedures	Demonstrate correct SCA procedures IAW AFI 11-2AC130, Vol 3. At the discretion of the flight examiner, an SCA may be considered successful if, in the opinion of the flight examiner, a safe landing could have been made at the missed approach point. Demonstrate proper go-around procedures as applicable to the situation.

Table 9. "General" AC-130 Fire Control Officer Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Knowledge of Directives	Be thoroughly familiar with policies and procedures contained in issued publications and T.O.s. Know performance limitations, warnings, operating procedures, operational prohibitions, and local/theater directives. For mission profiles, be thoroughly familiar with all applicable employment publications.
2. Crew Coordination	Maintain situational awareness of, and react appropriately to, crew inputs. Communicate with crew so they understand intentions and requirements to effect safe, efficient mission accomplishment.
3. Use of Checklist	Execute all required checklists in accordance with T.O.s and operating instructions. Checklist accomplishment will be measured against the expanded T.O.s and AFI 11-2AC-130, Vol 3 checklists.
4. Professional Equipment	Ensure all professional equipment is carried IAW AFI 11-2 AC-130 Vol 3 and is properly preflighted prior to departing for the mission.
5. Mission Preparation	Be thoroughly familiar with all aspects of the mission and coordinate with the crew to ensure sound tactical decisions are made to complete mission accomplishment.
6. Weapon/Ammunition Usage	Demonstrate knowledge of the appropriate selection and use of weapons and ammunition to achieve mission accomplishment. This include various types of rounds and fuse settings.
7. Life Support Equipment	Properly preflight all life support equipment as required for the mission being performed.
8. Currency of Publications	All required publications listed in AFI 11-2AC-130 Volume 3 are current and posted.
9. Knowledge of Emergency Procedures	Know location and understand use of all installed emergency equipment.
10. Post Flight	Complete appropriate checklist(s) IAW T.O.s. Ensure AFTO 781 write-ups are accomplished as required.
11. Judgement	Only "Q" or "U" will be awarded. Make decisions regarding performance of tasks so as to provide best chance of mission accomplishment without undue risk to aircraft or crew.
12. Fire Control System A. Mission Computer B. INS/GPS C. Multi-Functional Displays/ Symbology D. Fire Control Display	Understand how each component incorporates within the fire control system.

Table 10. "Mission" AC-130 Fire Control Officer Evaluation Criteria for Sub-Area Ratings of "Q".

MISSION	CRITERIA
13. Sensor Alignment	(AC-130H) Direct the sensors to acquire and track the alignment point. Complete the air alignment including the HUD/Sensor alignment, SADS and slaving checks, offset checks, and trainable gun checks IAW T.O. procedures and instructions. (AC-130U) Direct the sensors to acquire and track the alignment point. Complete sensor-sensor calibration, air boresight, slaving, and offset checks IAW T.O. procedures and instructions.
14. Tactical Navigation	Direct the airplane in the tactical environment utilizing all available resources to achieve mission accomplishment.
15. Target Acquisition/Sensor Employment	Demonstrate ability to accurately identify targets and analyze aircraft position based on these targets. Be able to use sensors and update systems as applicable to the specific aircraft.
16. Tweak Procedures	Be able to perform both fixed and trainable tweaks of the 20MM, 25MM, 40MM, 105MM guns as required by T.O.s/instructions.
17. Reconnaissance/Search	Demonstrate a working knowledge of the various methods used for searching IAW AFI 11-2AC-130 Vol 3, Chapter 18.
18. Close Air Support	Using range and bearing, laser sparkle, marking devices, and/or incoming radio transmissions, in determining the position of friendly forces versus target location(s). Coordinate with the pilot, navigator and sensors to ensure timely and accurate firepower to assist friendly units or Troops in Contact.
19. Interdiction	Demonstrate the ability to use both charts and/or imagery to identify the confirmation points and target (3 mr. size). Select appropriate weapons to ensure desired results.
20. Post Strike A. BDA/VCR Recording	Complete appropriate reports and forms. Ensure all information is stored and recorded properly for assessment purposes.
21. Dual-Target Attack	Perform DTA procedures IAW TO.s and AFI 11-2AC-130 Volume 3.
22. Degraded Procedures	Understand impact of degraded operations and how to compensate for degraded equipment to achieve mission accomplishment. Know operations' restrictions associated with degraded systems.

Table 11. "General" AC-130 EWO Mission Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Currency of Publications	All required publications listed in AFI 11-2AC-130 Volume 3 are current and posted.
2. Knowledge of Directives	Thoroughly familiar with all publications issued for AC-130 flying operations and aircrew training. Answer any question with reference to applicable publications. Know performance limitations, warnings, cautions, operating procedures, and operational prohibitions. For mission profiles, be thoroughly familiar with all applicable employment publications.
3. Mission Preparation	Coordinate all applicable mission information (simulated threats, threat avoidance navigation, etc.) with the necessary crewmembers in a timely manner. Coordinate all applicable mission information with all the necessary agencies/participants (AIs, ECM Range, etc.) in a timely manner. Create a realistic threat scenario within the training limits of the mission. The number and type of simulated threats should be commensurate with the length and type of mission.
4. Threat Analysis	Demonstrate the ability to properly determine threat areas, exposure times, altitudes, and mission routing to reduce exposure to threats.
5. Mission Briefing	The briefing should completely cover all EWO related items and be accomplished in a timely manner. Brief the applicable training events in the order they will be accomplished, including a description of the applicable EWO events (AIs, ECM Range, etc.) simulated threat scenario, threat capabilities, defensive capabilities, and crew tactics.
6. Professional Equipment	Ensure all professional gear is carried IAW 11-2AC-130 Volume 3 and is properly checked prior to departing for the aircraft.
7. Crew Coordination	Maintain situational awareness of, and react appropriately to, crew inputs. Communicate with crew so they understand intentions and requirements to effect safe, efficient mission accomplishment.
8. Use of checklist	Execute all required checklists in accordance with T.O.s and operations instructions. All checklist accomplishment will be measured against the expanded EWO checklist and applicable directives. Techniques not listed in any directives or the expanded checklist will not be required to be performed.
9. Safety Consciousness	Only "Q" or "U" will be awarded. Maintain constant awareness of safety and execute all duties in the safest manner possible under any given situation. Instructors and evaluators will maintain situational awareness of the student/examinee actions and performance.

GENERAL	CRITERIA
10. Judgment	Only "Q" or "U" will be awarded. Make decisions regarding performance of tasks so as to provide best chance of efficient mission accomplishment without undue risk to aircraft or crew.
11. Communication Procedures	Communicate using concise, professional radio discipline while ensuring all required communications are made to Command and Control agencies. Be familiar with required communications procedures for any airspace used on the mission.
12. Emergency Procedures/ Equipment	Demonstrate a complete knowledge on the number of, location of, and use of all emergency equipment. Demonstrate knowledge on recognizing an emergency situation, the appropriate emergency action to be taken, and the proper execution of emergency procedures.
13. Knowledge/Completion of Forms	Demonstrate working knowledge of the type and location of information contained in aircraft forms. Insert clear, concise, and unclassified write-ups in a manner that accurately depicts the malfunctions/problems encountered during the mission. Write-ups should include mode of operation, equipment indications, and effect on equipment performance. Properly complete pre-mission and post-mission forms.

Table 12. "Qualification/Tactical" AC-130 EWO Mission Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION/ TACTICAL	CRITERIA
14. Sensor Alignment (AC-130H only)	Demonstrate proper sensor alignment procedures including standardized terminology.
15. Sensor Systems (AC-130H only)	Configure sensor in a manner compatible to the radar beacon.
16. Target ID/ACQ/Tracking (AC-130H only)	Properly identify target beacon, acquire, and track.
17. Situational Awareness	Demonstrate the ability to maintain constant situational awareness, knowledge of what the crew/aircraft is doing, where the aircraft is, where it is supposed to be, and where it is going.
18. Threat Identification	Make timely, clear, and correct threat identification.
19. Crew Notification	Make timely, clear, and concise threat calls.
20. Use of Evasive Maneuvers	Demonstrate correct and timely use of evasive maneuvers. Ensure the maneuvers called are properly executed.
21. Expendable Employment	Demonstrate proper and timely use of expendables.
22. ECM/IRCM Employment	Demonstrate proper and timely use of ALQ-131/172 jamming. Demonstrate proper and timely use of IRCM.
23. Malfunction Analysis	Demonstrate ability to identify/recognize system malfunctions in a timely manner. Execute time-critical actions as necessary. Demonstrate ability to logically explain (verbally/physically) the steps necessary to determine the extent and probable causes of applicable malfunctions. Determine if a malfunction degrades ability to counter projected threats, and determine the impact the malfunction will have on mission completion/success.

Table 13. "General" AC/C-130 Flight Engineer Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Knowledge of Directives	Thoroughly familiar with all publications issued for the crew position. Answer any question with reference to applicable publications. Know performance limitations, warnings, operating procedures, and operational prohibitions. For mission profiles, be thoroughly familiar with all applicable employment publications.
2. Crew Coordination	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand engineers intentions and requirements to effect safe, efficient mission accomplishment.
3. Use of checklist	Execute all required checklists in accordance with T.O.s and operations instructions.

GENERAL	CRITERIA
4. Safety Consciousness	Only "Q" or "U" will be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors and evaluators should maintain situational awareness of the other engineers actions and performance.
5. Judgment	Only "Q" or "U" will be awarded. Demonstrate sound and logical thought process to accomplish mission.
6. Anti-Hijacking Procedures	Be familiar with procedures of covert communications (verbal/non-verbal), delay actions, and positive detainment for anti hijacking situations.
7. Identifying/Reporting Discrepancies	Identify malfunctioning systems or components and write clear, concise, and unclassified write-ups in a manner that accurately depicts the malfunctions/problems encountered during the mission. Write-ups should include mode of operation, equipment indications, and effect on equipment performance.
8. Knowledge/Use of Performance Data	Be familiar with aircraft performance requirements and effect of varying conditions on aircraft operations though out the mission. Demonstrate use of the applicable performance manuals.
9. Weight and Balance	Be familiar with information contained on the Form 365-4 and its effect on aircraft performance.
10. Ground Support Equipment	Identify and if necessary operate ground support equipment.
11. Refuel/Defuel	Be familiar with refuel and defuel procedures and requirements.

Table 14. "Preparation for Flight" AC/C-130 Flight Engineer Evaluation Criteria for Sub-Area Ratings of "Q".

PREPARATION FOR FLIGHT	CRITERIA
12. Mission Prerequisites	Be familiar with and accomplish all mission prerequisites.
13. Professional Equipment	Maintain appropriate professional equipment IAW all appropriate T.O.'s and AFI's
14. Aircraft Forms	Demonstrate working knowledge of the type and location of information contained in the aircraft forms.
15. Currency of Publications	All required publications listed in AFI 11-2AC-130, Volume 3 are current and posted.
16. Before Exterior Inspection	Complete appropriate checklist(s) IAW T.O.s and AFIs
17. Exterior Inspection	Complete appropriate checklist(s) IAW T.O.s and AFIs
18. Interior Inspection	Complete appropriate checklist(s) IAW T.O.s and AFIs
19. TOLD Card	Complete a TOLD card in accordance with applicable performance manual and be familiar with terms and definitions associated with the card.
20. Aircraft Preparation	Be able to communicate the aircraft status and ability to accomplish the mission to the aircraft commander.

Table 15. "Flight Phase" AC/C-130 Flight Engineer Evaluation Criteria for Sub-Area Ratings of "Q".

FLIGHT PHASE	CRITERIA
21. Before Starting/Starting Engines	Perform engine start IAW T.O. T.O.s procedures.
22. Before Taxi/Taxi	Safe taxi operations clearing obstacles by required distances. Follow standard marshalling signals
23. Engine Run Up	Complete appropriate checklist(s) IAW T.O.s and AFIs
24. Before Takeoff	Complete appropriate checklist(s) IAW T.O.s and AFIs
25. Takeoff	Monitor takeoff and take appropriate coordinated action in response to any abnormal condition. Complete appropriate checklist(s) IAW T.O.s and AFIs.
26. Climb	Monitor aircraft systems and performance throughout the climb and be familiar with types of climb out profiles. Recognize and take appropriate coordinated action in response to any abnormal condition.
27. Cruise	Monitor and operate aircraft systems throughout the cruise segment. Recognize and take appropriate coordinated action in response to any abnormal condition.
28. Descent/Landing	Complete appropriate checklist(s) IAW T.O.s and AFIs and be familiar with types of descent and landings.
29. After Landing/Engine Shutdown	Complete appropriate checklist(s) IAW T.O.s and AFIs and monitor engine shutdown IAW T.O. T.O.s.
30. Before Leaving Aircraft	Complete appropriate checklist(s) IAW T.O.s and AFIs.
31. Air Refueling Procedures	Complete appropriate checklist(s) IAW T.O.s and AFIs.
32. Live/Dry Fire	Monitor weapon status. Be familiar with scanning duties.
33. Departure/Approach Monitoring	Monitor departure and approach and be familiar standard requirements for each.
34. Low Level Procedures	Complete appropriate checklist(s) IAW T.O.s and AFIs.
35. NVG Knowledge/Procedures	Be familiar with NVG procedures and requirements.

Table 16. "Emergency Procedures" AC/C-130 Flight Engineer Evaluation Criteria for Sub-Area Ratings of "Q".

EMERGENCY PROCEDURES	CRITERIA
36. Boldface Emergency Procedures	Only "Q" or "U" will be awarded. Requires reciting proper actions in correct sequence, not necessarily a verbatim response.
37. Ground Emergencies (required through ground evaluation)	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with T.O.s and directives.
38. Takeoff Emergencies (required through ground evaluation)	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with T.O.s and directives.
39. Inflight Emergencies (required through ground evaluation)	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with T.O.s and directives.
40. Landing Emergencies (required through ground evaluation)	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with T.O.s and directives.

Table 17. "System Knowledge" AC/C-130 Flight Engineer Evaluation Criteria for Sub-Area Ratings of "Q".

SYSTEM KNOWLEDGE/ OPS	CRITERIA
41. Engine	Knowledge of basic engine systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
42. Propeller	Knowledge of basic propeller systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
43. Fuel	Knowledge of basic fuel systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
44. Electrical	Knowledge of basic electrical systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.

SYSTEM KNOWLEDGE/ OPS	CRITERIA
45. Hydraulic	Knowledge of basic hydraulic systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
46. Flight Controls/Flaps	Knowledge of basic flight controls and flap systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
47. Landing Gear/Brakes/ Steering	Knowledge of basic landing gear, brakes, and steering systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
48. Fire Detection/Extinguishing	Knowledge of fire detection and extinguishing systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
49. Pneumatic/Bleed Air	Knowledge of basic pneumatic and bleed air systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
50. Environmental/Air Conditioning	Knowledge of basic environmental and air conditioning systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
51. Pressurization/ Depressurization	Knowledge of basic pressurization systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.

SYSTEM KNOWLEDGE/ OPS	CRITERIA
52. Anti-icing/De-icing	Knowledge of basic anti -ice and de-ice systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
53. Lighting	Knowledge of basic lighting systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
54. Oxygen	Knowledge of basic oxygen systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
55. APU/GTC	Knowledge of basic Auxiliary Power Unit (APU) or Gas Turbine Compressor (GTC) systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
56. Doors/Hatches/Ramps	Knowledge of aircraft doors, hatches, and ramp and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
57. Windows/Windshields	Knowledge of basic windows and windshield systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
58. Radio/Radar Systems	Knowledge of basic radio and radar systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.

SYSTEM KNOWLEDGE/ OPS	CRITERIA
59. INS/SCNS	Knowledge of basic Inertial Navigation System (INS) and SCNS systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Determine if aircraft can safely fly given mission without various system components functioning.
60. Air Refueling	Knowledge of basic A/R systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
61. Voice Recorder	Knowledge of the voice recorder and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
62. Weapons	Knowledge of weapon system and ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.
63. Aircraft Defensive Systems/Equipment	Knowledge of basic aircraft defensive systems and the ramifications of component failure. Recognize common indications of component failure or pending failure. Know normal, abnormal, and emergency limitations and apply knowledge to determine if aircraft can safely fly given mission without various system components functioning.

Table 18. "Post Flight" AC/C-130 Flight Engineer Evaluation Criteria for Sub-Area Ratings of "Q".

POST FLIGHT	CRITERIA
64. Visual Inspection/Securing	Complete appropriate inspections IAW appropriate T.O.s and AFI's.
65. Knowledge/Completion of Forms	Complete appropriate forms IAW current directives. Demonstrate working knowledge of the type and location of information contained in the aircraft forms.

Table 19. "General" AC/C-130 Loadmaster Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Mission Preparation/Planning	Prepare for flight with proper flight gear and all required documentation and briefings required by AFIs. Review FCIF/FCIS for current information, Preflight aircraft, load aircraft, compute weight and balance. Review emergency procedures, training requirements, and Risk Management Matrix review.
2. Professional Equipment	Ensure all professional equipment is carried IAW AFI 11-2AC-130, Volume 3 and is properly preflighted prior to departing for the aircraft.
3. Currency of Publications	All required publications listed in AFI 11-2AC-130, Volume 3 are current and posted.
4. Use of checklist	Call for and execute all required checklists in accordance with T.O.s and operations instructions.
5. Aircraft Limitations	Know aircraft limitations IAW applicable directives and T.O.s.
6. Tiedown Restraint Criteria	Know criteria for restraining devices IAW applicable directives and T.O.s.
7. Loading Aids	Know criteria for use of equipment IAW applicable directives and T.O.s.
8. Supervisory Ability	Demonstrate ability to handle all aspects of passenger loading and transporting of passengers and cargo IAW applicable directives and T.O.s.
9. Interior Lighting	Demonstrate usage of interior lighting for appropriate missions IAW applicable directives and T.O.s.
10. Anti-Hijacking Procedures	Be familiar with procedures of covert communications (verbal/non-verbal), delay actions, and positive detainment for anti hijacking situations.
11. Safety Consciousness	Only "Q" or "U" will be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors and evaluators should maintain situational awareness of the other loadmasters actions and performance.
12. Judgment	Only "Q" or "U" will be awarded. Demonstrate sound and logical thought process to accomplish mission.
13. Crew Coordination	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand engineers intentions and requirements to effect safe, efficient mission accomplishment.
14. Dangerous Materials/Munitions Handling	Know how to handle dangerous/hazardous materials IAW applicable directives and T.O.s.

GENERAL	CRITERIA
15. Weight and Balance	Complete a Form 365-4, **Weight and Balance Clearance Form F – Transport**, in accordance with applicable performance manual and be familiar with terms and definitions associated with the form.
16. Customs/Border Clearance	Complete all forms required for mission accomplishment.
17. Knowledge of Publications and Procedures	Demonstrate working knowledge of all applicable publications. Be familiar with all loadmaster-related forms. For mission profiles, be thoroughly familiar with all applicable employment publications.

Table 20. "Preparation for Flight" AC/C-130 Loadmaster Evaluation Criteria for Sub-Area Ratings of "Q".

PREPARATION FOR FLIGHT	CRITERIA
18. Aircraft Configuration	Configure aircraft IAW mission directives.
19. Aircraft Preflight	Preflight aircraft using the appropriate T.O. and checklists.
20. Emergency Equipment	Be familiar with emergency equipment and cargo compartment systems. Operate/Monitor aircraft emergency exits, demonstrate the correct procedures to open all aircraft exits.
21. Systems Knowledge/ Operations	Knowledge of aircraft cargo compartment systems and the ramifications of component failure. Recognize common indications of component failure or pending failure.
22. Extra Equipment Inspection	Knowledge of additional equipment carried for mission accomplishment.
23. Proper Tiedown	Know tiedown procedures and limitations.
24. DD Form 365-4 Calculation	Complete in a timely manner IAW with appropriate T.O. and AFIs.
25. Crew/Passenger Comfort Items/	Utilize human relations' skills in handling passengers and provide customers with necessary comfort items, if available.
26. Equipment Stowed	Demonstrate proper handling of equipment to assure mission accomplishment.
27. Hot Cargo/Munitions Handling-Up/Download Procedures	Demonstrate proper procedures IAW applicable directives. Ensure safety area is maintained during all operations.

Table 21. "Flight Phase" AC/C-130 Loadmaster Evaluation Criteria for Sub-Area Ratings of "Q".

FLIGHT PHASE	CRITERIA
28. Interphone Procedures	Communicate with crew so they understand intentions and requirements to effect safe, efficient mission accomplishment.
29. Scanning Duties	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with directives. Instructors must know required parameters for initiating maneuvers and must ensure there is no confusion between real and simulated problems.
30. Prestrike	Demonstrate prestrike procedures IAW applicable directives and T.O.s.
31. Strike	Demonstrate strike procedures IAW applicable directives and T.O.s.
32. Scanning/Defensive Systems	Perform scanner duties IAW applicable directives and T.O.s. Demonstrate the use of the defensive systems in coordination with aircraft defensive maneuvers.
33. Poststrike	Demonstrate poststrike procedures IAW applicable directives and T.O.s.
34. Passenger Handling	Perform supervisory procedures of passengers IAW applicable directives and T.O.s.

Table 22. "Emergency Procedures" AC/C-130 Loadmaster Evaluation Criteria for Sub-Area Ratings of "Q".

EMERGENCY PROCEDURES	CRITERIA
35. Jettisoning Cargo/Munitions	Know cargo/ammo jettison procedures IAW applicable directives and T.O.s.
36. Fuselage Fire	Recognize abnormal aircraft operation and react appropriately to effect safe, timely termination of emergency condition in accordance with T.O.s and directives.
37. Egress/Bailout/Crash Landing/Ditching	Know all emergency procedures and responses to applicable situations.
38. Smoke and Fumes Elimination	Know all emergency procedures and responses to applicable situations.
39. Air Refueling Emergencies	Know all emergency procedures and responses to applicable situations.
40. In-flight Battle Damage Assessment	Know procedures and responses to applicable situations.
41. Landing Gear Emergencies	Know all emergency procedures and responses to applicable situations.
42. Flap Emergencies	Know procedures and responses to applicable situations.

NOTE:

All emergency procedures areas will be evaluated either "Q" or "U".

Table 23. "General" AC-130 Sensor Operator Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Knowledge of Directives	Thoroughly familiar with all publications issued for the crew position including the sensor operator inflight guide. Answer any question with reference to applicable publications. Know performance limitations, warnings, operating procedures, and operational prohibitions.
2. Currency of Publications	All required publications listed in AFI 11-2AC-130, Volume 3 are current and posted.
3. Professional Equipment	Will have the required professional equipment for each mission. Should prepare for flight with all required documentation required.
4. Mission Planning/ Briefing	Will prepare for flight by gathering target, threat, and friendly specific information, analyze mission information SPINS, ACO, ATO, ROE's, target photos and/or provided information, prepare tactical charts, attend crew, tactical, and all briefings required by instructions.

Table 24. "Qualification/Mission" AC-130 Sensor Operator Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION MISSION	CRITERIA
5. System(s) Knowledge	Demonstrate knowledge of ALLTV, LLLTV, Laser Illuminator, LTD/R, LTD/RF, STS, IDS, BDA recorder, Mission Computer System, and associated avionics equipment systems as required.
6. System(s) Operation	Demonstrate proficiency with ALLTV, LLLTV, Laser Illuminator, LTD/R, LTD/RF, STS, IDS, BDA recorder, Mission Computer System, and associated avionics equipment systems in both normal and degraded modes of operation.
7. Preflight	Perform preflight inspection on IDS and/or ALLTV and /or LLLTV system IAW T.O. procedures as required.
8. Use of Checklist	Execute all required checklists in accordance with T.O.s and operation instructions.
9. Life Support Equipment	Preflight helmet, oxygen mask, communication system, parachute, parachute harness, survival vest, Life Preserver Unit (LPU), chemical gear, and other items of survival equipment as required for the mission. Be familiar with survival vest contents and the operation of all components. Understand how to use the raft and LPUs operationally.
10. Crew Coordination	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand the sensor operator's intentions and requirements to effect safe, efficient mission accomplishment. Be familiar with required communications (CEOI, execution checklist, etc.) procedures.
11. Emergency Procedures	Only "Q" or "U" may be awarded. Demonstrate knowledge or perform ground/inflight emergencies IAW T.O.s. and instructions.

QUALIFICATION MISSION	CRITERIA
12. Mission Safety/ Judgement	Only "Q" or "U" may be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors should maintain situational awareness of the other crew members actions and performance.
13. Sensor Alignment	H model: Acquire and track the alignment point. Complete the air alignment including the HUD/Sensor alignment, SADS and slaving checks, offset checks, and trainable gun checks IAW T.O. –1 procedures and instructions. U model: Acquire and track the alignment point. Complete sensor-sensor calibration, air boresight, slaving, and offset checks IAW T.O. –1 procedures and instructions.
14. Scope Interpretation	Demonstrate the ability to distinguish the difference between man-made and natural objects. Be able to identify target types for the various sea, air, and land based weapons systems, both friendly and other.
15. Scope Orientation	Demonstrate the ability to maintain situational awareness with the sensor system, while keeping track of the aircraft position and heading versus the location of targets, threats, and friendly locations.
16. Target	
A. Identification	Demonstrate the ability to use both charts and/or imagery to identify the confirmation points and target (3 mr. size).
B. Acquisition/ Reacquisition	Demonstrate the ability to identify both moving and static targets prior to the aircraft attaining the tangent of the attack circle (rolling-in). Perform reacquisition of the same targets, as required, due to mission requirements.
C. Tracking	Track all objects to an accuracy of 0.5 mr.
17. Strike/Gun Firing Procedures	
A. Tweak	Perform both fixed and trainable tweaks of the 20MM, 25MM, 40MM, 105MM guns as required by T.O.s/instructions.
B. Target Scoring	Call all observed round impacts to an accuracy of ± 0.5 mr.
C. Two-Shot Drills	Perform Two-shot procedures with the 25MM, 40MM and/or 105MM in a timely manner.
D. Dual Target Attack (U-model only)	Perform at least one of the two DTA procedures IAW applicable directives.
18. Employment Safety	Only "Q" or "U" may be awarded. Demonstrate safe usage of consent throughout the flight. Perform all simulated or live fire and laser operations safely and IAW applicable T.O.'s and instructions.
19. Close Air Support	Using range and bearing, laser sparkle, marking devices, and/or incoming radio transmissions, to assist the NAV/FCO in determining the position of friendly forces versus target location(s). Perform all manual offsets in a timely and accurate manner in order to locate the required targets/friendlies.

QUALIFICATION MISSION	CRITERIA
20. Armed Reconnaissance	Perform the tasks associated with locating and attacking targets of opportunity along LOCs, using parallel, spiral, or random cut search method(s).
21. Sensor Guidance/Direction	Using Sensor Guidance, maintain the aircraft in a favorable position to fire at all times. When using Sensor Direction, position the aircraft in such a manner as to facilitate either recce or movement from point-to-point in an expeditious manner.
22. Defensive Procedures	Only "Q" or "U" may be awarded. Demonstrate knowledge of aircraft defensive tactics through Q&A or performance. Be familiar with aircraft defensive systems.
23. Post Flight	Perform postflight visual inspection of required systems IAW T.O. - 1 and instructions.
24. Reports/Forms/Debrief	Demonstrate working knowledge of the type and location of information contained in the aircraft AFTO Form 781A. Insert clear, concise write-ups in a manner that accurately depicts the malfunctions/ problems encountered during the mission in AFTO Form 781A and Sensor Status Form. Attend maintenance debrief.

Table 25. "General" AC-130 Aerial Gunner Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Knowledge of Directives	Thoroughly familiar with all publications issued for the crew position including the aerial gunner inflight guide. Answer questions with reference to applicable publications. Know performance limitations, warnings, operating procedures, and operational prohibitions.
2. Mission Preparation	Should prepare for flight with all required documentation required by instructions.
3. Mission Planning/Briefing	Should prepare for flight by attending all briefings required by AFIs. Perform aerial gunner, equipment, and/or SAR briefings as assigned.
4. Professional/Survival Equipment	Will have the required professional equipment for each mission. Preflight helmet, oxygen mask, communication headset, parachute, parachute harness, survival vest, Life Preserver Underarm (LPU), chemical gear, and other items of survival equipment as required for the mission. Be familiar with survival vest contents and the operation of all components. Understand how to use the raft and LPUs operationally.
5. Currency of Publications	All required publications listed in AFI 11-2AC-130, Volume 3 are current and posted.
6. Crew Coordination/ Communication	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand gunner intentions and requirements to effect safe, efficient mission accomplishment. Be familiar with required communications procedures.
7. Aircraft Defensive Systems/ Tactics	Demonstrate knowledge of aircraft defensive systems/tactics through Q&A or performance.
8. Munitions Handling	Perform munitions handling for all phases of the AC-130 mission IAW T.O. –1 and instructions as required.
9. Judgement	Only "Q" or "U" will be awarded. Demonstrate sound and logical thought process to accomplish mission.
10. Safety Consciousness	Only "Q" or "U" may be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors and evaluators should maintain situational awareness of the other gunners actions and performance.
11. Use of Checklist	Execute all required checklists in accordance with T.O.s and operation instructions.

Table 26. "Preparation for Flight" AC-130 Aerial Gunner Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION	CRITERIA
12. Preflight Inspection	Perform preflight inspection on 20MM, 25MM, 40MM, 105MM weapons systems IAW T.O. –1 procedures as required.
13. Trainable Weapons Check	Perform trainable weapons check IAW T.O. procedures.

Table 27. "Flight Phase" AC-130 Aerial Gunner Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION	CRITERIA
14. Sensor Alignment	Complete appropriate checklist(s) IAW T.O. procedures.
15. Pressurization/ Depressurization	Complete appropriate checklist(s) IAW T.O. procedures.
16. Prestrike	Perform prestrike procedures on 20MM, 25MM, 40MM, 105MM guns IAW T.O. –1 procedures as required.
17. Gun Firing Operations	Operate 20MM, 25MM, 40MM, 105MM guns procedures as required by T.O.s/instructions.
18. Poststrike	Perform poststrike procedures on 20MM, 25MM, 40MM, 105MM guns IAW T.O. –1 procedures as required.
19. System Knowledge	Demonstrate knowledge of 20MM, 25MM, 40MM, 105MM gun systems as required.

Table 28. "Emergency Procedures" AC-130 Aerial Gunner Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION	CRITERIA
20. Ground/Inflight Emergencies	Demonstrate knowledge or perform ground/inflight emergencies IAW T.O. and instructions.
21. Weapons Malfunctions	Perform and demonstrate knowledge of weapons malfunctions procedures, and malfunction causes IAW T.O. instructions, and the aerial gunner inflight guide (as required).

Table 29. "Postflight" AC-130 Aerial Gunner Evaluation Criteria for Sub-Area Ratings of "Q".

QUALIFICATION	CRITERIA
22. Visual Inspection	Perform postflight visual inspection of required systems IAW T.O. and instructions.
23. Knowledge/Completion of Forms	Demonstrate working knowledge of the type and location of information contained in the aircraft forms. Insert clear, concise write-ups in a manner that accurately depicts the malfunctions/ problems encountered during the mission.

Table 30. "General" AC-130 DSO Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Currency of Publications	All required publications are current and posted.
2. Knowledge of Directives	Thoroughly familiar with all publications issued for the crew position. Answer any question with reference to applicable publications. Know warnings, operating procedures, and operational prohibitions. Familiar with contents of FCIF library. Familiar with various mission profiles.
3. Mission Preparation/ Planning	Prepare for flight by reviewing all required files and bringing all required documentation. Use data from all available intelligence sources to assist the crew in threat avoidance during route study. Obtain target technical data; load information into software as applicable. Obtain required information, materials, and crypto for Data Link Equipment (DLE). Coordinate the location of SILENT SHIELD equipment modifications on the aircraft. Coordinate the availability of all required life support equipment IAW AFI 11-2AC-130 Vol 3.

4. Professional Equipment	Ensure all professional equipment is preflighted and on-board the aircraft in order to achieve mission accomplishment.
5. Mission Briefing	Attend all required mission briefs. If a DSO brief is requested or required at a minimum it should include proper classification, pertinent intelligence data, and SILENT SHIELD capabilities and limitations for the mission.
6. Use of Checklist	Call for and execute all required checklists in accordance with T.O.s and operating instructions.
7. Safety Consciousness	Only "Q" or "U" may be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors and evaluators should maintain situational awareness of the actions and performance of the trainee/evaluatee.
8. Judgment	Only "Q" or "U" may be awarded. Make decisions regarding performance of tasks so as to provide best chance of mission accomplishment without undue risk to aircraft, crew, or customers.
9. Emergency Procedures	Demonstrate a complete knowledge of the number, location, and use of all emergency equipment and exits. Demonstrate knowledge for recognizing an emergency situation, the appropriate emergency action to be taken, and the proper execution of emergency procedures.
10. Control of Mission Materials	Maintain control of classified equipment, mission flimsies, software, and crypto. Know procedures to obtain, store, and return classified material.
11. Life Support Equipment	Preflight all life support equipment required for overwater combat/contingency mission. Demonstrate wear of life support equipment required for combat/contingency mission. Familiar with survival vest contents and the operation of all components. Understand use of all life support and AERPS equipment.
12. Crew Coordination	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand your intentions and requirements to effect safe and efficient mission accomplishment.
13. Knowledge of Procedures	Demonstrate a working knowledge of local, unit, or other pertinent procedures IAW applicable directives and T.O.s.

Table 31. "Flight Phase" AC-130 DSO Evaluation Criteria for Sub-Area Ratings of "Q".

FLIGHT PHASE	CRITERIA
14. Equipment Preflight	Ensure SILENT SHIELD equipment is preflighted IAW applicable directives, checklists, and T.O.s.
15. Interphone Procedures	Preflight and follow interphone procedures in AFI11-2AC-130 Vol 3. Conduct interphone transmissions in a concise, clear manner that dictates to the crew all relative information to ensure mission accomplishment.
16. System Operation	Demonstrate frequency spectrum scans, discrete frequency searches and manual operations employing all assets of the Communication Surveillance System (CSS). Know CSS equipment hardware and software operations. Demonstrate ability to use DLE in conjunction with CSS. Know trouble-shooting techniques to correct in-flight problems affecting hardware or software of CSS and DLE.
17. Threat Knowledge, Analysis, and Reporting	Know characteristics, procedures, and capabilities associated with threats to the aircraft. Know CSS capabilities/limitations to threats. Demonstrate ability to prioritize equipment against threats based on location and level of threat to aircraft. Correctly relays threat-derived information affecting the safety of the aircraft or its mission to the appropriate crewmember.
18. Situational Awareness	Maintain situational awareness of crew actions throughout normal and emergency procedures. Aware of aircraft position and possible threats.

Table 32. "Post Flight" AC-130 DSO Evaluation Criteria for Sub-Area Ratings of "Q".

POST FLIGHT	CRITERIA
19. Debriefing	Ensure thorough debrief is completed with respective agencies and crew. Relay all pertinent intelligence as deemed necessary for safe execution of follow-on missions.
20. Forms Completion	Demonstrate working knowledge of the type and location of information contained in the aircraft and squadron forms. Insert clear and concise write-ups in a manner that accurately depicts the malfunctions/problems encountered during the mission. Write-ups should include mode of operation, equipment indications, effect on equipment performance, and trouble-shooting attempts.

MARVIN R. ESMOND, Lt General, USAF
DCS, Air and Space Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-2AC-130V1, *AC-130 Aircrew Training*

AFI 11-2AC-130V3, *AC-130 Operations Procedures*

AFI 11-202V1, *Aircrew Training*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFI 11-202V3, *General Flight Rules*

AFI 11-215, *Flight Manuals Program*

AFI 11-290, *Cockpit/Crew Resource Management Training Program*

AFI 11-401, *Flight Management*

AFI 13-212, *Weapons Ranges*

AFI 33-360V1, *Publications Management Program*

AFI 37-160V8 (to be converted to AFI 33-360V2), *The Air Force Management Program*

AFI 11-2KC-135V3, Addenda C, *KC-135 Special Operations*

AFMAN 13-209, *Instrument Procedures Design and Publication*

AFMAN 24-204, *Preparing Hazardous Materials for Military Air Shipment*

AFMAN 91-201, *Explosive Safety Standards*

AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials*

AFPAM 11-216, *Air Navigation*

AFPD 11-2, *Aircraft Rules and Procedures*

AFSOCI 11-203V5, A*C-130H Configuration/Mission Planning*

AFSOCI 11-203V6, *AC-130U Configuration/Mission Planning*

AFTTP 3-1 V1, (S) *General Planning and Employment Considerations, Special Operations Chapter*

AFTTP 3-1V2, (S) *Threat Reference Guide and Considerations*

AFTTP 31-1V31A, (S)*Tactical Employment, AC-130H SPECTRE Gunship*

AFTTP 31-1V31B, (S)Tactical Employment, AC-130U SPOOKY Gunship

AFSOCPAM 91-1, *AFSOC Risk Management Guide*

JP 3.03, *Doctrine for Joint Interdiction Operations*

JP 3-09.1, *Joint Laser Designation Procedures*

JP 3-09.2, *Joint Tactics, Techniques, and Procedures for Ground Radar Beacon Operations (J-Beacon)*

JP 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support*

JP 3-10.1, *Joint Tactics, Techniques, and Procedures for Base Defense*

T.O. 00-20-1, *Preventive Maintenance Program General Policy Requirements and Procedures*

T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*

T.O. 00-35D-54, *USAF Material Deficiency Reporting and Investigating System*

T.O. 1-1C-1, *Basic Flight Crew Air Refueling Manual*

T.O. 1-1C-1-29, *AC/EC/HC/MC-130 Flight Crew Air Refueling Procedures with KC-135 and KC-10*

T.O. 1-1B-40, *Weight and Balance Data*

T.O. 1-1B-50, *Weight and Balance*

T.O. 1C-130A-9, *Cargo Loading Manual*

T.O. 1C-130B-1, *Flight Manual C-130B, C-130E, and C-130H Aircraft*

T.O. 1C-130B-1-1, *Performance Data, C-130 Airplanes Equipped with T56-A-7 Engines*

T.O. 1C-130B-1-4, *C-130B, C-130E, and C-130H Aircraft and EC-130E Aircraft AF63-7815, AF63-7816, AF63-7828, and AF63-9816 with Self-Contained Navigation System (SCNS)*

T.O. 1C-130E-5, *Basic Weight Checklists and Loading Data C-130E, C-130H, and LC-130 Aircraft*

T.O. 1C-130H-1-1, *Performance Data, C-130 Airplanes Equipped with T56-A-15 Engines*

T.O. 1C-130(A)A-34-1-1, *Side Firing Munitions Ballistics Manual*

T.O. 1C-130(A)H-1, *Flight Manual AC-130H*

T.O. 1C-130(A)H-1-2, *Operator's Manual Navigation, Fire Control System AC-130H*

T.O. 1C-130(A)H-5, *Basic Weight Checklist and Loading Data AC-130H*

T.O. 1C-130(A)U-1, *Flight Manual AC-130U*

T.O. 1C-130(A)U-1-3, *Multifunction Display System Operators Manual*

T.O. 1C-130(A)U-5, *Basic Weight Checklist and Loading Data AC-130U*

T.O. 1C-130(A)U-34-1, *Aircrew Weapons Delivery Manual AC-130U*

T.O. 11A10-25-7, *Storage and Maintenance Procedures – Pyrotechnic Markers*

T.O. 11A10-26-7, *Storage and Maintenance Procedures – Pyrotechnic Markers*

Abbreviations and Acronyms

AC—Aircraft Commander

ACM—Additional Crewmember

AF—Air Force

AFI—Air Force Instruction

AFSOC—Air Force Special Operations Command

AG—Aerial Gunner

AGL—Above Ground Level

AI—Airborne Interceptor

AILA—Automatic Instrument Landing Approach

AIMS—Airlift Implementation and Monitoring System

ALLTV—All Light Level Television

APU—Auxiliary Power Unit

AR—Air Refueling

AR Exit Pt—Air Refueling Exit Point

ARCP—Air Refueling Control Point

ARCT—Air Refueling Control Time

ASHS—Ammunition Storage and Handling System

ASRR—Airfield Suitability and Restrictions Report

ATC—Air Traffic Control

ATM—Air Turbine Motor

ATO—Air Tasking Order

ATOC—Air Transportation Operations Center

BAI—Back-up Aircraft Inventory

BDA—Battle Damage Assessment

C—Celsius (degrees)

CAS—Close Air Support

CC—Commander

CEOI—Command Electronic Order of Information

CHUM—Chart Updating Manual

CIP—Computed Impact Point

COMAFSOF—Commander Air Force Special Operations Forces

COMSEC—Communications Security

CONUS—Continental United States

CP—Co-pilot

CVR—Cockpit Voice Recorder

DC—Direct Current

DH—Decision Height

DoD—Department of Defense

DOT—Department of Transportation

DOV—Standardization/Evaluation

DR—Dead Reckoning

DSO—Direct Support Officer

DTA—Dual Target Attack

DV—Distinguished Visitor

ECM—Electronic Counter Measures

EMCON—Emission Control

EOC—End of Course

EOD—Explosive Ordnance Disposal

EPE—Emergency Procedure Evaluation

ER—Exceptional Release

ERO—Engines Running Onload/Offload

ESA—Emergency Safe Altitude

ETA—Estimated Time of Arrival

ETD—Estimated Time of Departure

ETE—Estimated Time Enroute

ETP—Equal Time Point

EWO—Electronic Warfare Officer

F—Fahrenheit (degrees)

FAA—Federal Aviation Administration

FCF—Functional Check Flight

FCG—Foreign Clearance Guide

FCIF—Flight Crew Information File

FCO—Fire Control Officer

FCS—Fire Control System

FDP—Flight Duty Period

FE—Flight Engineer

FIH—Flight Information Handbook

FLIP—Flight Information Publication

FOD—Foreign Object Damage

FS—Flight Station

FSO—Fire Support Officer

FTT—Fixed Target Track

GMT—Greenwich Mean Time

GPS—Global Positioning System

HAA—Height Above Aerodrome

HAT—Height Above Touchdown

HE—High Explosive

HEI—High Explosive Incendiary

HERP—Hostile Environment Repair Procedures

HF—High Frequency

HQ—Headquarters

HUD—Heads-up Display

IAF—Initial Approach Fix

IAW—In Accordance With

ICAO—International Civil Aviation Organization

IDCU—Integrated Display Computer Unit

IDS—Independent Disconnect System

IDS—Infrared Detection Set

IFF/SIF—Identification Friend or Foe/Selective Identification Feature

IFR—Instrument Flight Rules

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

INS—Inertial Navigation System

IP—Instructor Pilot or Initial Point

IR—Infrared Sensor or Operator

IRCM—Infrared Counter Measures

JMEM—Joint Munitions Effectiveness Manual

KIAS—Knots Indicated Airspeed

LLLTV—Low Light Level Television

LM—Loadmaster

LNO—Liaison Officer

LOC—Line of Communication

LPU—Life Preserver underarm

LSDZ—Laser Surface Danger Zone

LTDRF—Laser Target Designator and Range-finder

MAN—Manual

MARSA—Military Assumes Responsibility for Separation of Aircraft

MC—Mission Computer

MCC—Mission Control Center

MDA—Minimum Descent Altitude

MDGT—Mission Data Ground Terminal

MDS—Mission Design Series

MFD—Multi-Function Display

MFOV—Medium Field of View

MM—Millimeter

MNPS—Minimum Navigation Performance Specifications

MQF—Master Question File

MR—Milliradian

MSA—Minimum Safe Altitude

MSL—Mean Sea Level

MTI—Moving Target Indicator

NAV—Navigator

NC—Non-Current

NEW—Net Explosive Weight

NFOV—Narrow Field of View

NLT—No Later Than

NM—Nautical Mile

NOTAMS—Notices to Airmen

NVG—Night Vision Goggle

OFP—Operational Flight Program

OPCON—Operational Control

PA—Primary Aimline

PAR—Precision Approach Radar

PDO—Publishing Distribution Office

PFPS—Portable Flight Planning System

PIPP—Projectile Impact Point Prediction

RCR—Runway Condition Reading

RFA—Restricted Fire Area

ROE—Rules of Engagement

RPM—Revolutions per Minute

RTB—Return to Base

RVR—Runway Visual Range

RWR—Radar Warning Receiver

RZCP—Rendezvous Control Point

RZCT—Rendezvous Control Time

RZIP—Rendezvous Initial Point

SAD—Sensor Angle Display

SAM—Surface-to-Air Missile

SAR—Search and Rescue

SCA—Self-Contained Approach

SCNS—Self-Contained Navigation System

SEAD—Suppression of Enemy Air Defenses

SEMI—Semi-automatic

SID—Standard Instrument Departure

SITREP—Situation Report

SLA—Sightline Angle

SOCCE—Special Operations Command and Control Element

SOFPARS—Special Operations Forces Planning and Rehearsal System

SOW—Special Operations Wing

SPINS—Special Instructions

STAR—Standard Terminal Arrival

STS—Special Tactics Squadron

T.O.—Technical Order

TAS—True Airspeed

TDY—Temporary Duty

TERPS—Terminal Procedures

TIC—Troops in Contact

TIT—Turbine Inlet Temperature

TOF—Time of Fall

TOLD—Takeoff and Landing Data

TRN—Trainable

TRP—Target Reference Points

TV—All-light/Low-light Television Sensor or Operator

U—Unqualified

UARRSI—Universal Aerial Refueling Receptacle Slipway Installation

UHF—Ultra-High Frequency

VFR—Visual Flight Rules

VHF—Very High Frequency

VMC—Visual Meteorological Conditions

WP—White Phosphorous

WX—Weather

Terms

Air Refueling (AR)—Airborne fuel onload by receiver aircraft.

Air Refueling Control Point (ARCP)—The planned geographic point over which the receiver arrives in the precontact position with respect to the assigned tanker. For Helo AR, the planned geographic point or coordinates over which the tanker arrives abeam the receiver and assumes formation lead.

Air Refueling Control Time (ARCT)—The planned time that the receiver and tanker will arrive over the ARCP.

Airborne Mission Commander—The individual given the responsibility to accomplish part of the overall operation. When a formation is used to conduct the operation, this individual is in overall command of all formation aircraft.

Basic Aircraft Qualified—Crews or crewmembers qualified and current to fly the unit aircraft only on non-mission sorties.

Basic Mission Capable—Crews or crewmembers qualified and current to perform some portion of the unit mission, but who do not maintain combat mission ready status.

Category I Route—Any route that does not meet the requirements of a category II route, including low level and overwater routes.

Category II Route—Any route on which the position of the aircraft can be accurately determined by the overhead crossing of a radio aid (NDB, VOR, TACAN) at least once each hour with positive course guidance between such radio aids.

Combat Entry Point—A geographical point inbound to the objective area where the hostile environment

is penetrated.

Combat Mission Ready—Crews or crewmembers fully qualified and current to perform the unit mission.

Combat Offload—Method by which palletized cargo is offloaded without Materials Handling Equipment (MHE).

Command and Control Center (C3)—An agency used by a commander to plan, direct, or control operations. Each C3 provides supervision, guidance, and control within its assigned area of responsibility. For the purpose of this instruction, C3s include the AFSOC Command Center, AMC Command Center, Command Post (CP), Air Mobility Elements (AME), Airlift Coordination Centers (ACC), Combat Control Teams (CCT), AFRES Headquarters Command Post (AFRES HQ CP), NGB Field Support Center, and ARC wing or group operations centers and command posts.

Commander Air Force Special Operations Command (COMAFSOC)—The Commander of Air Force Special Operations Command.

Commander Air Force Special Operations Forces (COMAFSOF)—The commander designated by USCINCSOC for CONUS deployments or by theater SOC/CCs for overseas deployments, who is responsible for management of Air Force Special Operations Forces (AFSOF) within a theater, a geographic area, or a designated operation. The COMAFSOF is responsible to USCINCSOC for management of CONUS-deployed AFSOF or to the respective SOC/CC for management of AFSOF theater-assigned AFSOF and is responsible to COMAFSOC for monitoring and management of AFSOF operating within the specific area of responsibility.

Contingency Mission—A mission operated in direct support of an operation plan, operation order, disaster, or emergency.

Deadhead Time—Duty time accrued by crewmembers in a passenger or ACM status.

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

Equal Time Point (ETP)—The point along a route at which an aircraft may either proceed to the first suitable airport or return to the last suitable airport in the same amount of time based on all engines operating (see chapter 11).

Hazardous Cargo or Materials—Explosive, toxic, caustic, nuclear, combustible, flammable, biologically infectious, or poisonous materials that may directly endanger human life or property, particularly if misused, mishandled or involved in accidents (AFJI 11-204, AFMAN 24-204, TO 11N-20-11).

Hot Gun—A situation when a live round or rounds cannot be cleared from a weapon inflight, the gun cannot be mechanically and electrically safetied, and a probability of inadvertent firing exists.

Hung Ordnance—Any ordnance or stores that fail to release, jettison, or fire and cannot be removed from the weapon prior to landing (ALE-40/47 chaff or flare squibs that fail to fire are not considered hung ordnance).

Inert Ordnance—Ordnance with the explosive or incendiary material removed or ordnance designed for

training. (i.e. 40mm Dummy Ammo)

Interfly—Intermixing of crewmembers from different units in the same aircrew or unit aircrews flying aircraft assigned to another unit.

Jammed Gun—A gun containing ammunition that cannot be cleared from the gun inflight but can be safetied, no probability of inadvertent firing exists.

Live Ordnance—Combat type ordnance incorporating explosive or incendiary material to include flares.

Low Level—Operations conducted below 3,000 feet above ground level.

May—Indicates an acceptable or suggested means of accomplishment.

Military Authority Assumes Responsibility for Separation of Aircraft (MARSA) —A condition whereby the military services involved assume responsibility for separation between participating aircraft in the air traffic control (ATC) system.

Minimum Safe Altitude (MSA)—MSA is an intermediate altitude which will provide terrain clearance in VMC or IMC.

Night Vision Goggles (NVG)—Self-contained, battery-operated devices that amplify light to enhance night vision.

Offset Aiming Point (OAP)—A reference, other than the actual target, used for aircraft positioning.

Operating Weight—Basic aircraft weight plus weight of crewmembers, crew baggage, steward's equipment, emergency and extra equipment.

Operational Control (OPCON).—Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

Point of Impact (PI)—The point on the drop zone where the first airdropped parachutist or cargo item lands or is expected to land.

Self-Contained Approach (SCA)—An approach conducted using self-contained, onboard navigation systems.

Serial—Any number of aircraft under a commander, usually conveying a unit to a landing, extraction, or drop zone.

Should—Indicates a recommended procedure that is required if practical.

Special Tactics Squadron (STS)—Air Force special operations combat control and pararescue forces.

Time of Fall (TOF)—The time in seconds for a projectile to travel from the gun muzzle to the target.

Time Over Target (TOT)—The actual time an aircraft is at a geographic point or area carrying out an assigned mission

Tweak—A computation performed either manually or by fire control computer to correct for errors in weapon or sensor alignment and to solve for the ballistic wind. The purpose of performing a tweak is to cause ordnance to impact on target.

Will—Indicates a mandatory requirement.

Attachment 2

TEXT OF IC 2000-1

9 FEBRUARY 2000

SUMMARY OF REVISIONS

This change incorporates interim change (IC) 2000-1 which removes the requirement for Emergency Procedures Evaluation (EPE) as a prerequisite, deletes the requirement for an EPE on a pilot mission evaluation, clarifies the requisite requirements for evaluations, clarifies the requirement for recurring special mission evaluations for pilots and navigators, clarifies the requirement for verbally debriefing items on pilot instrument evaluations, and expands the requirements for Direct Support Operator evaluation criteria. See the last attachment of the publication, IC 2000-1, for the complete IC. A (H) indicates revisions from the previous edition.

4.1.2.2. Qualification: Qualification evaluations will include subareas under "General" (Table 2.) and "Qualification" (Table 3.). For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites; Boldface examination and EPE are also requisites. Open and Closed Book examinations or Formal School End of Course examinations, Boldface examination, and EPE are requisites for all other types of evaluations.

4.1.2.3. Mission: Mission evaluations will include subareas under "General" (Table 2.) and "Mission" (Table 5.). Open and Closed Book examinations or Formal School End of Course examinations are requisites (prerequisites for initial evaluations).

4.1.2.4. Special Missions. Special Missions evaluations will include subareas listed under "General" (Table 2.) and "Special" (Table 6.). Initial special mission evaluations may be conducted separately or in conjunction with the mission evaluation. A separate "flight phase" entry will be made for the specific special mission(s) evaluated. There are no requisites for special mission evaluations.

4.1.2.4.1. Low-level. Initial or requalification evaluation is required. Conduct the evaluation on a low-level and include mission planning, briefings (Aircraft Commander only), target interdiction, route study, and map reading.

4.1.2.4.2. Initial/Requalification Air Refueling Contact. Pilots must demonstrate the ability to accomplish a sustained fuel transfer. Except for breakaway, evaluate emergency procedures verbally.

4.2.2.2. Mission: The following are requisites: Open and Closed Book examinations or Formal School End of Course, (for combined basic proficiency and mission evaluations, Boldface examination and EPE are also requisites). For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites.

4.2.2.2.3.4. Performing duties. Dual-qualified navigator/FCOs may administer evaluations to unqualified navigators and unqualified FCOs simultaneously.

4.2.2.2.4. Special mission. Navigators designated to maintain low-level qualification require an initial evaluation. The evaluation may be administered in conjunction with the recurring mission evaluation.

4.2.2.2.4.1. Initial and Requalification. Fly a minimum of 45 minutes terminating overhead a planned interdiction target in a firing orbit at a preplanned time of arrival. TOT criteria is plus or minus 30 seconds. TOT criteria may be evaluated based on the time of arrival at the initial point (IP) if weather does not permit climb to firing altitude.

4.2.2.2.4.1.1. (added) Dual Qualified Navigator/FCO. Dual qualified navigator/FCOs will receive initial or requalification low-level evaluations in the navigator position. Low-level navigators who become dual qualified Nav/FCOs are qualified to perform low-level duties in the FCO position without additional instructor certification or evaluation.

4.2.2.2.4.2. Deleted.

4.2.2.2.4.3. Deleted.

4.3.2.1. Qualification (Basic Proficiency): All non-rated aircrew members require an initial qualification evaluation. For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites; Boldface examination and EPE are also requisites. Open and Closed Book examinations or Formal School End of Course examinations, Boldface examination, and EPE are requisites for all other types of evaluations. Non-rated aircrew members maintaining mission qualification require recurring combined basic proficiency and mission evaluation.

4.3.2.2. Mission: Mission evaluations may be administered concurrently with the initial qualification evaluation. The following are requisites: Open and Closed Book examinations or Formal School End of Course, (for combined basic proficiency and mission evaluations, Boldface examination and EPE are also requisites). For initial evaluations, Open and Closed Book examinations or Formal School End of Course examinations are prerequisites.

Table 4. Note 2. Do not evaluate a PAR as the only precision approach when the non-precision approach evaluated is the ASR, and vice-versa.

Table 30. "General" AC-130 DSO Evaluation Criteria for Sub-Area Ratings of "Q".

GENERAL	CRITERIA
1. Currency of Publications	All required publications are current and posted.
2. Knowledge of Directives	Thoroughly familiar with all publications issued for the crew position. Answer any question with reference to applicable publications. Know warnings, operating procedures, and operational prohibitions. Familiar with contents of FCIF library. Familiar with various mission profiles.
3. Mission Preparation/ Planning	Prepare for flight by reviewing all required files and bringing all required documentation. Use data from all available intelligence sources to assist the crew in threat avoidance during route study. Obtain target technical data; load information into software as applicable. Obtain required information, materials, and crypto for Data Link Equipment (DLE). Coordinate the location of SILENT SHIELD equipment modifications on the aircraft. Coordinate the availability of all required life support equipment IAW AFI 11-2AC-130 Vol 3.
4. Professional Equipment	Ensure all professional equipment is preflighted and on-board the aircraft in order to achieve mission accomplishment.
5. Mission Briefing	Attend all required mission briefs. If a DSO brief is requested or required at a minimum it should include proper classification, pertinent intelligence data, and SILENT SHIELD capabilities and limitations for the mission.
6. Use of Checklist	Call for and execute all required checklists in accordance with T.O.s and operating instructions.
7. Safety Consciousness	Only "Q" or "U" may be awarded. Maintain situational awareness and execute mission so as to avoid unnecessary risk. Instructors and evaluators should maintain situational awareness of the actions and performance of the trainee/evaluatee.
8. Judgment	Only "Q" or "U" may be awarded. Make decisions regarding performance of tasks so as to provide best chance of mission accomplishment without undue risk to aircraft, crew, or customers.

9. Emergency Procedures	Demonstrate a complete knowledge of the number, location, and use of all emergency equipment and exits. Demonstrate knowledge for recognizing an emergency situation, the appropriate emergency action to be taken, and the proper execution of emergency procedures.
10. Control of Mission Materials	Maintain control of classified equipment, mission flimsies, software, and crypto. Know procedures to obtain, store, and return classified material.
11. Life Support Equipment	Preflight all life support equipment required for overwater combat/contingency mission. Demonstrate wear of life support equipment required for combat/contingency mission. Familiar with survival vest contents and the operation of all components. Understand use of all life support and AERPS equipment.
12. Crew Coordination	Maintain situational awareness of, and react appropriately to crew inputs. Communicate with crew so they understand your intentions and requirements to effect safe and efficient mission accomplishment.
13. Knowledge of Procedures	Demonstrate a working knowledge of local, unit, or other pertinent procedures IAW applicable directives and T.O.s.

Table 31. "Flight Phase" AC-130 DSO Evaluation Criteria for Sub-Area Ratings of "Q".

FLIGHT PHASE	CRITERIA
14. Equipment Preflight	Ensure SILENT SHIELD equipment is preflighted IAW applicable directives, checklists, and T.O.s.
15. Interphone Procedures	Preflight and follow interphone procedures in AFI11-2AC-130 Vol 3. Conduct interphone transmissions in a concise, clear manner that dictates to the crew all relative information to ensure mission accomplishment.
16. System Operation	Demonstrate frequency spectrum scans, discrete frequency searches and manual operations employing all assets of the Communication Surveillance System (CSS). Know CSS equipment hardware and software operations. Demonstrate ability to use DLE in conjunction with CSS. Know trouble-shooting techniques to correct in-flight problems affecting hardware or software of CSS and DLE.
17. Threat Knowledge, Analysis, and Reporting	Know characteristics, procedures, and capabilities associated with threats to the aircraft. Know CSS capabilities/limitations to threats. Demonstrate ability to prioritize equipment against threats based on location and level of threat to aircraft. Correctly relays threat-derived information affecting the safety of the aircraft or its mission to the appropriate crewmember.
18. Situational Awareness	Maintain situational awareness of crew actions throughout normal and emergency procedures. Aware of aircraft position and possible threats.

Table 32. "Post Flight" AC-130 DSO Evaluation Criteria for Sub-Area Ratings of "Q".

POST FLIGHT	CRITERIA
19. Debriefing	Ensure thorough debrief is completed with respective agencies and crew. Relay all pertinent intelligence as deemed necessary for safe execution of follow-on missions.
20. Forms Completion	Demonstrate working knowledge of the type and location of information contained in the aircraft and squadron forms. Insert clear and concise write-ups in a manner that accurately depicts the malfunctions/problems encountered during the mission. Write-ups should include mode of operation, equipment indications, effect on equipment performance, and trouble-shooting attempts.