

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

**AIR FORCE MANUAL 11-2C-146A,
VOLUME 1**



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Flying Operations

C-146A AIRCREW TRAINING

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This manual implements Air Force Policy Directive (AFPD) 11-2, *Flying Operations*, AFPD 11-4, *Aviation Service*, and references Air Force Instruction (AFI) 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, and Air Force Manual (AFMAN) 11-202, Volume 1, *Aircrew Training*. It establishes standards for qualification, mission qualification, continuation, and upgrade training for aircrew members operating C-146A aircraft. This publication does not apply to the Air National Guard. This publication applies to the regular Air Force (AF) and the Air Force Reserve (AFR). Major commands (MAJCOMs), direct reporting units, and Field Operating Agencies are to forward proposed supplements to this volume to AF/A3TS, through Air Force Special Operations Command (AFSOC)/A3TA, for review and coordination prior to approval of the publication in accordance with (IAW) AFI 11-200. This publication does not apply to the United States Space Force. Refer recommended changes and questions about this publication to the Office of Primary Responsibility using the DAF 847, *Recommendation for Change of Publication*; route DAF 847 from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See DAFMAN 90-161, *Publishing Processes and Procedures* for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the publication OPR for non-tiered compliance items. This manual requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by Title 37 United States Code 334, *Special aviation incentive pay and bonus authorities for officers*, Department of Defense Instruction 7730.67, *Aviation Incentive Pays and Bonus Program* and Executive Order 13478,

Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers. The applicable System of Records Notice F011 AF XO A, Aviation Resource Management System (ARMS) is available at: <http://dpclo.defense.gov/Privacy/SORNs.aspx>. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System.

SUMMARY OF CHANGES

Changes to this publication include: Updated Air Force regulatory guidance references to match current publications, mirrored AFRC 12 month window for Active Duty Squadrons to have 12 months from the time a new core mission event is added to train and qualify aircrew in the new event given SOFORGEN considerations, and updated the language for selecting aircraft commanders into upgrade training.

Chapter 1

GENERAL GUIDANCE

1.1. General. This manual provides for training management of C-146A aircrew members. Training policy, guidance, and requirements are set forth for each phase of aircrew training. Training is designed to progressively develop the combat readiness of each aircrew member while maintaining previously acquired proficiency.

1.1.1. Aircrew Training Directive Guidance. The primary training method for C-146A initial qualification, initial mission qualification, transition qualification, requalification, or upgrade training is attendance at a formal school.

1.1.2. Aircrew Capability. Operational squadrons will maintain mission ready status on unit assigned aircrew members. **(T-3).**

1.1.2.1. Squadrons will have 12 months from the time a new core mission event is added and MAJCOM guidance issued to train and qualify aircrew in the new event. **NOTE:** AFRC units also have up to 12 Months to train and qualify aircrew on new core mission events. **(T-2).**

1.1.2.2. Commanders will not assign additional duties to first assignment “pipeline” (directly out of formal C-146A training) crew members (officer and enlisted) for their first six months in the unit and not until after combat mission ready (CMR) training is complete. **Exception:** Air Reserve Component (ARC). **(T-3).** This guidance allows pipeline students to learn the weapon system without distraction of an additional duty; all other personnel may be assigned additional duties.

1.1.2.3. Squadron commanders (Sq/CC) may carry “pipeline” crew members as mission ready (MR) for up to six months if an aircrew member arrives at the unit after a Permanent Change of Station (PCS) or formal school and is not MR in all core mission events.

1.1.2.3.1. This guidance does not apply to basic aircraft qualification events.

1.1.2.3.2. If training is not complete in six months, the aircrew member becomes non-mission ready (NMR).

1.1.2.3.3. Aircrew will not perform events in which they are not qualified unless under the direct supervision of an instructor. **(T-2).**

1.2. Roles and Responsibilities. AFSOC Commander (CC) is responsible for overall management of Air Force flying training programs supporting Air Force Special Operations Forces and United States Special Operations Command. AFSOC is designated as the lead command for C-146A Mission Design Series (MDS) aircraft.

1.2.1. AFSOC/A3 will issue updated mission continuation training guidance via Ready Aircrew Program (RAP) Tasking Message (RTM) as necessary to Operations Group (OG)/CC for implementation. AFSOC/A3 is responsible for the management of the flying hour program.

1.2.1.1. The RTM prescribes annual training requirements for continuation training once graduate level formal training is complete.

1.2.1.2. RTM contents shall not be used as a basis for Syllabus of Instruction (SOI) minimum requirements. **(T-2).**

1.2.2. AFSOC is responsible for C-146A aircrew initial, transition, requalification, instructor upgrade, and refresher training.

1.2.2.1. AFSOC/A3TA is responsible for AFSOC C-146A continuation training.

1.2.2.2. AFSOC/A3TS is responsible for C-146A Aircrew Training Device (ATD) support.

1.2.2.3. AFSOC/A3TA is the primary source for formal training products. When specific formal courseware is not published, units may use locally-developed training syllabi that have been reviewed and approved by AFSOC/A3TA.

1.2.3. Formal Training Unit (FTU) Commander Responsibilities. See Air Force Special Operations Command Instruction (AFSOCI) 36-2602, *Formal Aircrew Training Management*.

1.3. Secondary Method Training (SMT). In-unit training using applicable formal school courseware is referred to as SMT in this publication. To accomplish SMT, submit a waiver to AFSOC/A3T. See AFMAN 11-202, Vol 1, as supplemented, for guidance. **(T-2).**

1.4. Waivers. Unless otherwise noted, the MAJCOM/A3 is the waiver authority for AFMAN 11-2C-146A, Vol 1, aircrew training requirements. Refer to **Table 1.1** for the processing of waiver requests.

1.4.1. When a training item is directed by another instruction, refer to that instruction to determine the correct waiver authority (e.g. small arms, law of armed conflict, etc.).

Table 1.1. Processing of Waiver Requests.

Waiver requested by:	Waiver Authority	Forward request through:	Reply sent to:	Info copy sent to:
AFSOC unit	AFSOC/A3T	Group Training to AFSOC/A3T	Group Training	Requesting Unit
AFRC unit	AFRC/A3T	Group/OGV to 10 AFOST to AFRC/A3T	Group/OGV	10 AF/OST, AFSOC/A3T, Requesting Unit

1.4.2. OG/CCs or Commander Air Force Special Operations Forces (COMAFSOF) are the waiver authority for individual, case-by-case ground and flying training requirements as outlined below.

1.4.2.1. They can extend ground training requirement due dates up to two months for the designated items in the MAJCOM-specific C-146A RTM ground training table. Items required by other AFIs will not be waived by the OG unless specifically authorized to do so in the source AFI. **(T-2).**

1.4.2.2. They can extend due dates for the duration of an exercise, contingency, or operational mission for events, IAW applicable MAJCOM-specific C-146A RTM, on an individual basis only if the following conditions apply:

1.4.2.2.1. An aircrew member goes overdue while away from home station.

1.4.2.2.2. The training is not available at the deployed location.

1.4.2.3. They can waive flying training requirements (MAJCOM-specific C-146A RTM basic aircrew qualification (BAQ) and MR tables except as otherwise noted) on an individual basis only. Wings and groups must keep an accurate record of waivers granted. **(T-2).**

1.4.2.4. They must notify MAJCOM training office of any OG extensions. **(T-2).**

1.5. Senior Officer Flying. AFMAN 11-202, Vol 1, as supplemented, identifies senior officer qualification training requirements. See formal course syllabus for additional guidance. The C-146A Senior Officer Course results in BAQ for pilots with instrument/qualification Form 8.

1.6. Career Enlisted Aviator. Career Enlisted Aviator qualifications are not tied to *AFMAN 36-2100, Military Utilization and Classification*, skill-level upgrade. All enlisted aircrew qualifications are separate and distinct from skill level qualification. When an AF Form 8, *Certificate of Aircrew Qualification*, is completed for the applicable flight evaluation, then that crew member is qualified to perform all duties assigned to that crew qualification regardless of skill level. Aircrew instructor qualifications and flight examiner certifications are also separate and distinct from On-The-Job trainer or certifier designation and are reflected in Air Force Specialty Code (AFSC) by use of “K” prefix (aircrew instructor), “T” prefix (FTU instructor), and “Q” prefix (aircrew flight examiner).

1.7. Transfer of Aircrews.

1.7.1. For intra-command transfer of aircrew members, the gaining organization will honor validated training completed by newly assigned crew members prior to the transfer. **(T-2).**

1.7.2. For inter-command transfer, certifications and qualifications should be accepted to the maximum extent practical, as long as training and evaluation standards are equivalent. The Squadron Director of Operations (DO) at the gaining unit should review the individual's career training folder and flight evaluation folder to determine which certifications and qualifications will be honored.

1.7.3. Aircrew members qualified in the same MDS are considered qualified in that equipment throughout AFSOC when used for the same mission. **(T-2).**

1.7.4. Instructor training and qualifications may be accepted at the discretion of the gaining unit commander.

1.8. Permanent Change of Station (PCS) Screening.

1.8.1. Losing units will screen individual flight and ground training records during unit out-processing. **(T-3).**

1.8.2. Accomplish this screening in sufficient time to correct discrepancies prior to PCS. Losing unit will provide a printed copy of current ground and flying training summaries to

individuals prior to PCS. **(T-3)**. See DAFMAN 11-401, *Aviation Management*, for additional guidance.

1.9. Command Relationships. The command relationship between the 492nd and 919th in the current Memorandum of Agreement (MOA) is part of a VCSAF approved Association Plan IAW AFI 90-1001, paragraph 3.3.3. For an explanation of the command relationship between units belonging to AFSOC and those belonging to AFRC, see the current MOA. A copy of this MOA is available in the command suite of both the 492nd Special Operations Wing (SOW) Headquarters (HQ) and 919th SOW HQ.

Chapter 2

QUALIFICATION TRAINING

2.1. Overview. This chapter outlines the minimum requirements for basic aircraft qualification (BAQ). Qualification training provides the training necessary to initially qualify crew members in a basic crew position and flying duties. Upon completion of qualification training, the crew member attains BAQ status.

2.2. General Requirements. The primary method of initial qualification and requalification training is the appropriate formal training course listed in the education and training course announcements (ETCA).

2.2.1. If no requalification course exists, conduct requalification using the initial or Special Operations Forces (SOF) transition qualification course.

2.2.2. For Flight Surgeon and X-prefix flyers training requirements, refer to AFMAN 11-202, Vol 1, as supplemented.

2.3. Training Prerequisites. Course prerequisites are IAW the appropriate formal course syllabus, the ETCA, AFMAN 11-202, Vol 1, and this manual.

2.3.1. The syllabus/SOI designates the course prerequisite approval authority.

2.3.2. BAQ is normally accomplished in conjunction with mission qualification training (MQT).

2.4. Ground Training Requirements. Complete ground training requirements IAW AFMAN 11-202, Vol 1, the ETCA, and the formal course syllabus. In addition, all crew members must complete ground training requirements IAW **Table 2.1**, prior to the first flight. **(T-1)**.

Table 2.1. Basic Aircraft Qualification Ground Training Requirements.

Basic Aircraft Qualification Ground Training Requirements	Reference	Event ID
Crew Resource Management	AFMAN 11-202, Vol 1 AFMAN 11-290, (as supplemented)	G060
Aircrew Flight Equipment Familiarization Training	AFI 11-301, Vol 1	LL01
Emergency Egress Training, Non Ejection Seat	AFI 11-301, Vol 1	LL03
Local Area Survival	AFI 16-1301	SS01
Marshalling Exam	AFMAN 11-218	G101
Flight Physical	DAFMAN 48-123	ARMS
Physiological Training	AFMAN 11-403	ARMS
Notes:		

Basic Aircraft Qualification Ground Training Requirements	Reference	Event ID
<ol style="list-style-type: none"> 1. For Flight Surgeon and X-prefix flyers training requirements, refer to AFMAN 11-202, Vol 1, as supplemented. 2. See MDS-specific RTM for additional information on requirements. 		

2.5. Flying Training Requirements. Satisfactorily completing the appropriate ETCA formal course satisfies the requirements of this section.

2.6. Basic Aircraft Qualification Conversion, Transition, and Difference Training. Refer to [Chapter 3](#) for mission difference training requirements.

2.6.1. Conversion Training. Unit conversions follow AFMAN 11-202, Vol 1, as supplemented. If a formal school course is unavailable, OG/CCs will submit unit conversion training requests through the chain of command for MAJCOM/A3 approval. **(T-2).**

2.6.2. Transition Training (TX). TX is authorized for the C-146A. When approved, transition courses will be located in the C-146A SOI. If no transition courses exist, use the initial qualification training course. **(T-2).**

Chapter 3

MISSION QUALIFICATION TRAINING (MQT)

3.1. Overview. This chapter establishes the minimum training requirements for completing mission qualification, requalification, and differences training. Upon completion of mission qualification training, the crew member will be assigned MR status. **(T-3)**. There are no C-146A training programs that result in a basic mission capable (BMC) status.

3.2. General Requirements. All crew members will complete initial, conversion, or transition qualification prior to mission qualification training and mission certification. The primary method of mission qualification or requalification is to complete the appropriate formal training course. Completing the appropriate formal course satisfies the training requirements of this chapter. BAQ is a prerequisite for Mission Qualification Training. **(T-2)**.

3.2.1. If no requalification course exists, conduct requalification using the initial or SOF transition mission qualification course.

3.2.2. Units may request waivers to conduct mission qualification via SMT IAW AFMAN 11-202, Vol 1, as supplemented, when attendance is not practical or quotas are not available.

3.2.2.1. Approved in-unit mission qualification training must be accomplished IAW applicable formal school courseware and the guidance below: **(T-2)**.

3.2.2.1.1. Flying training lessons should be completed sequentially. If mission scheduling or student progress dictates otherwise, in-unit training sequences may be changed by the Squadron Director of Operations.

3.2.2.1.2. There should be minimum time lapse between training missions, and every effort should be made to complete MQT requirements within the prescribed time period.

3.2.3. For Flight Surgeon and X-prefix flyers training requirements, refer to AFMAN 11-202, Vol 1, as supplemented.

3.3. Training Prerequisites. Course prerequisites are IAW the appropriate formal course syllabus, the ETCA, AFMAN 11-202, Vol 1, and this manual. The formal school syllabus designates the course prerequisite waiver approval authority.

3.3.1. Basic qualification and mission qualification training may be accomplished simultaneously on a single MDS. Aircrews will not accomplish multiple MDS qualification upgrades simultaneously. **(T-2)**.

3.3.2. Mission Qualification course prerequisites will determine whether or not a pilot will be trained and evaluated as a Mission Copilot (MC) or Mission Pilot (MP). **(T-3)**.

3.3.3. Aircraft Commander. Pilots must meet the requirements of **Table 5.1** in order to be selected for aircraft commander upgrade. **(T-2)**.

3.4. Ground Training Requirements. Complete all ground training IAW AFMAN 11-202, Vol 1, and applicable AFSOC specific C-146A RTMs as part of mission qualification training or prior to certifying individuals as MR. Completion of training will establish due dates for recurring ground training required in **Chapter 4**. Credit any training accomplished at a formal school.

Qualified MR crew members transferred from other units require only unit-specific mission ready training events and events which are due or overdue.

3.4.1. Academic Training. Complete all academic and ground training delineated in applicable courseware.

3.4.2. Written Examination. Crew members must complete a written examination IAW AFMAN 11-2C-146A, Vol 2. The formal school will not forward their examinations as part of the courseware for in-unit qualifications. **(T-2)**.

3.5. Flying Training Requirements. Satisfactorily completing the appropriate formal course satisfies the requirements of this section. Formal course training will include all core mission events applicable to the crew member's aircraft and crew position. **(T-2)**.

3.5.1. Approved in-unit qualification training must be accomplished IAW applicable formal school courseware. **(T-2)**.

3.5.2. Crew member requirements may be completed on training or operational missions under the supervision of an instructor in the same aircrew position. Comply with restrictions in AFMAN 11-2C-146A, Vol 3.

3.6. Mission Qualification Transition Training. Transition training is authorized for the C-146A. When approved, transition courses will be located in the C-146A SOI. If no transition courses exist, use the initial qualification training course.

Chapter 4

CONTINUATION TRAINING

4.1. General Requirements.

4.1.1. Requirements in this chapter and the RTM are the minimum flying and related ground training to maintain currency and training status. The RTM contains all ground training and flying requirements tables and definitions.

4.1.2. Training requirements may be completed on any sortie if the accrediting criteria of this instruction and the MAJCOM-specific C-146A RTM are met. Sorties and events that are compatible may be credited on the same flight.

4.1.3. Aircrew members cannot log continuation training requirements in events in which they are unqualified.

4.1.4. Training events accomplished on a successful evaluation or an instructor certification may be credited toward the individual's volume requirements.

4.1.5. Flying training events accomplished during formal training should use the course completion date (successful evaluation date) to establish the due dates for all subsequent currency and requirements. Use actual dates for ground training. For all training events accomplished during formal training to a 3C (or equivalent), but not accomplished during the evaluation, log volume of zero in ARMS, and enter the checkride or certification date.

4.1.6. Aircraft flying requirements may be accomplished in a certified ATD as noted in the RTM BAQ and MR flying requirements tables.

4.2. Flying Training Levels (FTLs). The use of experienced-based FTLs allows the squadron commander to prioritize training resources.

4.2.1. Aircrew members should meet the minimum criteria established in **Table 4.1**, before assignment to the respective training level (**Exception:** ARC squadron commanders may assign FTLs to individuals not meeting these minimum requirements with MAJCOM/A3T approval). FTLs are not tied to flight hours for AFRC FTU Instructors. When these minima are met, awarding a training level is at the sole discretion of the squadron commander. **NOTE:** The aircrew member's availability to fly should not be a factor in assigning FTLs.

4.2.1.1. FTLs are based on minimum primary aircraft assigned (PAA) time and total time, per **Table 4.1** For basic qualification FTL, PAA time will include the C-146A weapons system trainer (WST). **(T-3).**

4.2.1.1.1. FTL "A"- Highly experienced BAQ and/or MR aircrew members.

4.2.1.1.2. FTL "B"- Experienced BAQ and/or MR aircrew members.

4.2.1.1.3. FTL "C"- Inexperienced BAQ and/or MR aircrew members; all copilots.

Table 4.1. Minimum FTL Flying Hour Requirements.

Crew Position	FTL “A”	FTL “B”
	PAA / Total Flying Hours	PAA / Total Flying Hours
Pilot	500/1,000	250/500
Loadmaster	800/1,000	500/800

4.2.2. Crew members may be assigned different FTLs for basic and mission qualifications and individual events.

4.2.3. Change of FTL. Once a annual period begins, personnel will not be moved to a level requiring fewer events until the next annual period. **(T-3)**.

4.3. Proration of Training Requirements. For requirements and procedures on proration of training requirements, see AFMAN 11-202, Vol 1, and any appropriate supplements.

4.4. Recurrency and Requalification Training. Training is required whenever an aircrew member does not meet a currency requirement in this instruction. An aircrew member will not perform events unsupervised until training has been accomplished. **(T-2)**.

4.4.1. Loss of Currency. Failure to accomplish events listed in C-146A RTM training tables results in a loss of currency for that event. Crew members are noncurrent the day after event currency expires.

4.4.1.1. Loss of currency in any C-146A RTM BAQ table event normally results in loss of basic aircraft currency (with the exceptions listed in the RTM). These individuals will fly under the supervision of an instructor or flight examiner in the same crew position on all sorties until recurrent. Refer to the RTM for exceptions and cross crew position training approved events.

4.4.1.2. BAQ table (in the RTM) event currency requirements may be accomplished in either a C-146A WST or C-146A aircraft. Lost basic aircraft qualification annual currency may be regained either in the aircraft or in a certified WST per RTM BAQ table restrictions.

4.4.1.3. Loss of currency exceeding six months. Non-currency in designated BAQ events (RTM BAQ table, note 1 events) in excess of six months results in loss of BAQ. Crew members non-current in designated mission events (RTM MR table, note 1 events) in excess of six months results in loss of mission qualification.

4.4.2. Regaining Currency.

4.4.2.1. Specified C-146A RTM BAQ and MR events require an evaluation (unqualified), if loss of currency exceeds six months (see AFMAN 11-202, Vol 1). Other events require showing proficiency to an instructor in the aircraft or simulator to regain currency.

4.4.2.2. If loss of currency exceeds 24 months for events not requiring an evaluation, the squadron training officer will open a training folder and additional ground and flight training, as directed by the Squadron Commander, will be completed. **(T-2)**.

4.4.2.3. Aircrew noncurrent in special mission events which only require an instructor certification (**Table 5.3**) may regain currency by showing proficiency in that event to an instructor.

4.4.2.4. Aircrew noncurrent more than 24 months in special mission events requiring an evaluation per RTM will complete all initial training and evaluation requirements for that special mission event. **(T-2)**.

4.4.3. Requalification Training. Crew members requiring requalification will accomplish training IAW AFMAN 11-202, Vol 1, applicable MAJCOM supplements, **Chapter 2**, **Chapter 3**, and **Chapter 5** of this manual. **(T-2)**. Cross crew position training is defined in AFI 11-202, Vol 1, AFSOC Supplement. Restricted events are defined in the C-146A RTM.

4.5. Ground Training. Accomplish ground training IAW the MAJCOM-specific C-146A RTM ground training table. Conduct training IAW the publications referenced in the RTM ground training table, as well as the notes in that table and the guidance in **Chapter 4** of this manual. The publications specific to the required training or the RTM take precedence over the requirements of this manual.

4.5.1. Failure to Complete Ground Training Events. Make-up training should be accomplished at the earliest opportunity. The following apply when crew members exceed due dates for events in the applicable MAJCOM-specific C-146A RTM ground training table:

4.5.1.1. Grounding items. Crew members will not perform flight duties until the grounding item is satisfied. **(T-2)**.

4.5.1.2. Training status items. Crew members will not fly without instructor supervision. **(T-2)**.

4.5.1.3. Mission Ready (MR) items. Failure to accomplish MR events in the RTM ground training table results in NMR status, and the individual cannot deploy as a crew member.

4.5.2. Ground Training Events. See current C-146A RTM for Ground Training Event definitions and requirements.

4.5.3. C-146A Simulator Refresher Course. The periodic refresher course is designed to improve standardization and to provide maximum training on normal, instrument, and emergency and/or degraded procedures. Refresher instruction can be provided by an Aircrew Training System (ATS) contractor or position-specific aircrew instructor, using the SOI and formal school courseware. Units or crew members who desire to practice specific events will identify those requirements on the first day of training.

4.5.3.1. The recommended minimum crew size for this course is an aircraft commander, copilot, and loadmaster. If units are unable to provide the minimum crew size, they will ensure that the ATS contractor is able to support less than the minimum crew; otherwise, the ATS contractor is not required to provide the training. **(T-3)**.

4.5.3.2. Instructors may credit the C-146A refresher course when they instruct a full C-146A refresher course (ARC-only: ATS contractors who are also qualified crew members may credit the C-146A refresher course when teaching the course in a civilian capacity).

4.5.3.3. C-146A refresher training is not required for aircrew members who will not be flying the same type or similar aircraft beyond four months after their due date.

4.5.3.4. When C-146A WSTs are not available for training, HQ AFSOC/A3T will acquire C-146A or equivalent commercial simulator refresher courses to serve as alternate training for this requirement.

4.5.4. Ancillary Training. Ancillary training is any guidance or instruction that contributes to mission accomplishment, but is separate from an Air Force Specialty or occupational series. Some ancillary training does not impact mission ready status or mobility status. This manual, and associated MAJCOM-specific RTM are not the governing directive for completion of ancillary training events. They do not include ancillary training required by DAFI 36-2670, *Total Force Development*. This includes Total Force Awareness Training and Expeditionary Skills Training, which will be tracked at unit level. **(T-3)**. Individuals are responsible for completing additional ancillary ground training requirements. In accordance with AFMAN 11-202, Vol 1, the source AFI provides training frequency for these events unless an approved waiver has been authorized. See Unit Deployment Manager to ensure compliance with additional non-aircrew specific training requirements.

4.6. Flying Training.

4.6.1. All aircrew members who maintain BAQ or MR status must accomplish all applicable training requirements of the C-146A RTM, based on assigned FTL (A, B, or C). **(T-2)**. See the C-146A RTM for more detailed currency and volume flying requirements by FTL. MR aircrew will also comply with the following: **(T-2)**.

4.6.1.1. MR aircrew members will also accomplish applicable mission ready requirements from the C-146A RTM according to their mission qualification and FTL. **(T-2)**.

4.6.1.2. Aircraft Commanders will maintain currency IAW the C-146A RTM in either seat (unless seat-specific). **(T-2)**. Emphasis should be on left seat flying. BAQ pilots will only accomplish mission events (i.e. semi-prep, short field operations, max effort takeoffs and landings) when under the direct supervision of an instructor pilot (IP). **(T-2)**. AFMAN 11-2C-146A, Vol 3, further defines takeoff and landing policy. Copilots will maintain currency IAW MAJCOM-specific C-146A RTM in the right seat only. **(T-2)**.

4.6.1.3. Instructors and flight examiners may not log events performed by other crew members during instruction or evaluations unless permitted by the RTM. **(T-3)**. **Exception:** With squadron commander approval, formal school instructors may log 50% of volume requirements and update currency with events accomplished by students under their direct supervision.

4.6.2. Flying Currency Event Definitions. See the C-146A RTM for complete annual volume and currency events and their definitions. Flight Surgeons will log currency IAW AFMAN 11-202, Vol 1 requirements. **(T-2)**.

4.7. Multiple Qualifications. There are no multiple qualifications available for the C-146A aircraft and no requirements for them.

Chapter 5

UPGRADE/SPECIALIZED TRAINING

5.1. General. This chapter identifies the prerequisites and training requirements for qualified aircrew members upgrading to additional levels of qualification and certification in specialized flight events.

5.1.1. The flying time prerequisites for upgrade are based on the crew member having gained the knowledge and judgment required to effectively accomplish the unit's missions. Sq/CCs will ensure their continuation training programs emphasize these areas. **(T-3).**

5.1.2. Crew members will have an in-depth knowledge of systems, procedures, and instructions before entering the formal upgrade program. **(T-3).**

5.2. Combat Mission Ready (CMR) program. CMR is designed to provide the deployment skill requirements for AFSOC aircrew members. Refer to AFSOCI 36-2601, *Air Commando Development*, for further details of the CMR program. New accession crew members will not deploy in a flying capacity until they complete CMR. **(T-2)**

5.3. Advanced Tactical Readiness (ATR) program. ATR is designed to enhance crew member mission and combat proficiency and squadron readiness for aircrew members. Refer to AFSOCI 36-2201 for further details of the ATR program.

5.3.1. Aircrew must complete CMR prior to starting the ATR program. **(T-2).** ATR is a prerequisite for upgrade to aircraft commander for pilots, or upgrade to instructor for loadmaster (LM) crew positions.

5.3.2. Squadron commanders, with OG/CC's concurrence, may tailor ATR for experienced aircrew members (AFSOC and non-AFSOC) cross-flowing into the MDS on a case-by-case basis.

5.3.3. Squadron commanders may waive 30 percent of the total and PAA flying hours required for upgrade to aircraft commander or instructor (non-pilot crew positions) once the crew member has completed ATR.

5.3.3.1. Can be waived on an individual basis only.

5.3.3.2. File a copy of the waiver in the individual's training record.

Table 5.1. Minimum Hours Required for Initial Upgrade to C-146A Aircraft Commander.

TOTAL FLYING HOURS (Note 2)	PAA FLYING HOURS (Note 1,2)
1,500	50
500	100
Notes:	
1. PAA hours should include no more than 10% other time.	
2. Subtract all "Other" time, as defined by AFI 11-401, <i>Aviation Management</i> , from the required total and PAA flying hours. Add all Federal Aviation Administration (FAA)-certified Do-328-	

100 level C or D simulator or C-146A WST time toward PAA flying hour requirements.

5.4. Aircraft Commander Certification. Pilots will not fly as a pilot-in-command until certified as an aircraft commander IAW AFMAN 11-202, Vol 2, *Aircrew Standardization/Evaluation Program* as supplemented. **(T-2).**

5.4.1. Following completion of required training, pilots should be certified as an aircraft commander within 120 days unless extenuating circumstances exist.

5.4.2. Prior Qualified Aircraft Commander Certification. Prior qualified aircraft commanders, in any MDS, who are evaluated according to MP standards during MQT may enter a unit-developed aircraft commander certification program and may be certified after completion of ATR and attaining a minimum of 100 C-146A PAA flying hours (OG/CC is waiver authority for the 100 C-146A PAA flying hours). The 100 PAA flying hours includes C-146A WST time. **Exception:** “Other” time, as defined by AFI 11-401 will not be used. **(T-3).**

5.5. Instructor Upgrade.

5.5.1. Unit commanders will personally review each instructor candidate’s qualifications and select instructors based on their background, experience, maturity, and ability to instruct. **(T-2).**

5.5.2. Initial Candidates. All initial instructor upgrade candidates must be MR in their unit’s mission for a minimum of six months. **(T-2).** **Exception:** Prior qualified instructors are not required to be MR for six months.

5.5.2.1. Squadron commanders may waive 10 percent of the PAA hours required for upgrade to IP.

5.5.2.1.1. Can be waived on an individual basis only. **(T-2).**

5.5.2.1.2. File a copy of the waiver in the individual’s training record. **(T-2).**

Table 5.2. Minimum Hours Required to Upgrade to Instructor.

	TOTAL HOURS (Note 2)	PAA HOURS (Note 1, 2)
PILOT	800	200
	1,500	100
LM	800	500
	1,500	300

Notes:

1: Airframe specific PAA hours should be no more than 10% other time.

2: Include simulator time logged in an active FAA-certified Do-328-100 level C or D simulator or C-146A WST.

5.6. Ground and Flight Training Requirements. Before being designated an instructor, candidates should demonstrate to a flight examiner their ability to instruct and perform selected maneuvers and items according to applicable directives. In addition, all candidates will adhere to the following:

5.6.1. Qualify in the applicable formal school instructor course for their crew position. If no formal school instructor course exists, qualified instructors will conduct ground and flying training IAW the applicable MAJCOM syllabi. **(T-2)**. First time instructors must complete flight instructor preparatory course or equivalent. **(T-2)**.

5.6.1.1. Instructor Requalification. Instructor candidates who were previously qualified as instructors in their current AFSOC MDS aircraft may requalify directly to instructor status.

5.6.1.2. Instructor Transfers. Instructor candidates who were previously qualified as instructors in another AFSOC MDS aircraft may be trained in-unit at the discretion of the unit commander.

5.6.1.3. Crew members Previously Qualified as United States Air Force (USAF) Aircrew Instructors. With OG/CC approval, these crew members may upgrade in-unit without a secondary method training waiver. OG/CCs should take into consideration the previously qualified instructors' experience with AFSOC roles, missions and command and control. They should meet requirements of **Paragraph 5.3.2** Training will be accomplished IAW MAJCOM approved syllabus of instruction. **(T-3)**.

5.7. Flight Examiner Upgrade. Before being designated as a flight examiner, candidates should demonstrate satisfactory knowledge of command training and evaluation policies and procedures. In addition, they should demonstrate the ability to administer an evaluation IAW AFMAN 11-2C-146A, Vol 2. Conduct initial evaluator upgrade training IAW MAJCOM-approved guidance. Annotate certification on an AF Form 4348, *USAF Aircrew Certification*, AF Form 1381, *USAF Certification of Aircrew Training*, or MAJCOM-approved substitute.

5.8. Special Mission Qualifications and Instructor Certified Event Training. Special mission qualification and instructor certified events training may be completed in-unit without a waiver. Comply with the requirements of AFMAN 11-202, Vol 1, and this publication. Units will coordinate all in-unit developed courseware and syllabi with MAJCOM/A3T for approval. **(T-2)**.

5.8.1. Special Mission Qualifications. The squadron commander will select aircrew members qualified in the unit's mission to maintain additional special qualifications. **(T-3)**. A flight evaluation is required for the below special mission qualifications. Aircrew members are not required to maintain currency in special mission events to maintain MR status. Instructors are authorized to teach any special mission events in which they are qualified and current unless specifically restricted. Conduct evaluations IAW AFMAN 11-2C-146A, Vol 2. Upon completion of training and qualification, maintain currency IAW this publication and applicable RTMs.

5.8.2. Instructor Certified Events. **Table 5.3** lists the events which require instructor certification on an AF Form 4348 (or MAJCOM-approved substitute), and the crew positions allowed certification for an event. Instructors are authorized to teach any event in which they are certified and current unless specifically restricted. Complete training IAW this publication and MAJCOM-approved AF Form 4111, *SOF/CSAR Training Record*, approved electronic equivalent, or SOI (if available). Aircrew will maintain currency IAW this publication and applicable RTM. **(T-2)**.

5.8.2.1. These events may be taught at the formal school as part of MQT. Formal school instructors will make AF Form 4348 or MAJCOM-approved substitute entries for all **Table 5.3** training completed during mission qualification. (T-2).

Table 5.3. Instructor Certified Events.

EVENT	Crew Position
Maximum Effort Procedures	Pilot, LM
Tactical Descents and Arrivals	Pilot, LM
Category II ILS Procedures	Pilot

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

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 12 September 2018

AFMAN 11-202, Vol 1, *Aircrew Training*, 22 November 2010

AFMAN 11-202, Vol 2, *Aircrew Standardization/Evaluation Program*, 30 August 2021

AFMAN 11-2C-146A, Vol 2, *C-146A Aircrew Evaluation Criteria*, 15 July 2022

AFMAN 11-2C-146A, Vol 3, *C-146A Operations Procedures*, 22 March 2019

AFMAN 11-218, *Aircraft Operations and Movement on the Ground*, 4 April 2019

AFI 11-301 Vol 1, *Aircrew Flight Equipment (AFE) Program*, 10 October 2017

DAFMAN 11-401, *Aviation Management*, 26 October 2020

AFMAN 11-403, *Aerospace Physiological Training Program*, 12 August 2020

AFI 16-1301, *Survival, Evasion, Resistance and Escape (SERE) Program*, 3 August 2017

DAFMAN 48-123, *Medical Examinations and Standards*, 7 December 2020

AFI 33-322, *Records Management and Information Governance Program*, 27 July 2022

AFPD 11-2, *Aircrew Operations*, 30 January 2019

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

AFSOCI 36-2201, *Air Commando Development*, 22 November 2017

DAFMAN 90-161, *Publishing Process and Procedures*, 14 April 2022

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

DAF 847, *Recommendation for Change of Publication*

AF Form 1381, *USAF Certification of Aircrew Training*

AF Form 4111, *SOF/CSAR Training Record*

AF Form 4348, *USAF Aircrew Certifications*

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSC—Air Force Specialty Code
AFSOC—Air Force Special Operations Command
AFSOIC—Air Force Special Operations Command Instruction
ARC—Air Reserve Component
ARMS—Aviation Resource Management System
ATD—Aircrew Training Device
ATR—Advanced Tactical Readiness
ATS—Aircrew Training System
BAQ—Basic Aircraft Qualification
BMC—Basic Mission Capable
CC—Commander
CMR—Combat Mission Ready
DO—Director of Operations
ETCA—Education and Training Course Announcements
FAA—Federal Aviation Administration
FTL—Flying Training Level
FTU—Formal Training Unit
HQ—Headquarters
IAW—In Accordance With
IP—Instructor Pilot
IQT—Initial Qualification Training
LM—Loadmaster
MAJCOM—Major Command
MDS—Mission Design Series
MOA—Memorandum of Agreement
MP—Mission Pilot
MQT—Mission Qualification Training
MR—Mission Ready
NMR—Non-Mission Ready
OG—Operations Group
PAA—Primary Aircraft Assigned
PCS—Permanent Change of Station

RAP—Ready Aircrew Program

RTM—Ready Aircrew Program Tasking Memorandum

SMT—Secondary Method Training

SOF—Special Operations Forces

SOI—Syllabus of Instruction

SOW—Special Operations Wing

SQ—Squadron

TX—Transition Training

USAF—United States Air Force

WST—Weapon System Trainer

Terms

Ancillary Training—Universal training, guidance, or instruction, regardless of Air Force Specialty Code (AFSC), that contributes to mission accomplishment. It does not include functional, occupational, or additional duty training. Ancillary Training is divided into the following four categories: Annual Total Force Awareness Training, Selected Force Training, Event Driven Training, and Expeditionary Skills Training. See AFI 36-2201V1.

Basic Aircraft Qualification (BAQ) Aircrew Member—An aircrew member who has satisfactorily completed qualification training in the basic aircrew position and maintains aircraft currency IAW this instruction. The aircrew member, when current, may perform the events in the BAQ table of the MDS-specific RTM.

Basic Mission Capable (BMC) Aircrew Member—An aircrew member who has satisfactorily completed IQT and MQT, and is maintaining 50 percent of the applicable mission qualification currency requirements of this instruction. Basic mission capable crew members may perform primary crew duties on any unilateral training mission. For other missions, the squadron commander must determine the readiness of each basic mission capable crew member to perform primary crew duties.

Certify/Certification—The process of documenting that an individual is trained and qualified to perform in a given capacity. Normally accomplished by the Sq/CC.

Combat Mission Ready (CMR)—An aircrew member who has satisfactorily completed IQT and MQT, and maintains qualification and proficiency in the command or unit combat mission.

Continuation Training—Ground and flight training events necessary to BAQ, BMC, or MR status. The continuation training program provides crew members with the volume, frequency, and mix of training necessary to perform unit's missions.

Conversion Training—Training is normally associated with a unit conversion to another MDS. Conversion training requires completion of a formal school initial qualification course. For unit conversions, when formal school courses are not available to handle the throughput, MAJCOMs will develop, and coordinate with the training command, in-unit training plans that maximize use of highly experienced personnel as the initial cadre.

Core Mission Events—A crew member must be qualified in all core mission events to be considered MR or BMC. To determine how non-currency in any core mission event affects overall mission currency, refer to the aircraft's mission ready flying requirements. Loss of qualification in any core mission event results in loss of overall mission qualification.

Crew Resource Management (CRM)—Training concept that emphasizes crew effectiveness by enhancing individual and aircrew performance in communication, situational awareness, effective leadership and management, and crew coordination.

Currency Event—Flying continuation training events with prescribed maximum interval-between-accomplishment.

Difference Training—Training accomplished when changing between same design aircraft and the amount of training needed for qualification does not warrant attendance at a formal qualification course. Training necessary to qualify an individual in a different tactic or system within the same aircraft.

Direct Supervision—A crew member is considered under direct supervision when flying with an instructor in the same crew position. For pilots the IP will occupy one of the pilot seats. For other crew positions, the instructor will be readily available to assume the primary duties if required.

Education and Training Course Announcements (ETCA) —Reference for formal courses giving MAJCOM procedures, security requirements, reporting instructions, clothing requirements and location information. <https://etca.randolph.af.mil/>

Event—A training item to be accomplished. Multiple events may be completed and logged during a sortie unless specifically excluded elsewhere in this manual.

Expeditionary Skills Training—A category of Ancillary Training. Training directly related to an Airman's ability to survive and operate in a contingency environment. Examples of expeditionary skills training include chemical, biological, radiological, and nuclear, and Self-Aid/Buddy Care.

Flying Training Level (FTL)—A standard assigned to crew members, based upon experience and Sq/CC recommendation, directing flying continuation training requirements.

Formal School Courseware—Training materials and programs developed for training crew members at formal schools. It includes all student study guides, workbooks, computer-based training lessons, instructor guides, and applicable training forms related to the specific course. Training courses listed in ETCA. Formal courses may be conducted using the secondary method (in-unit) of training.

Initial Qualification Training (IQT)—Training needed to qualify a crew member for basic crew duties in an assigned position for a specific aircraft, without regard for the unit's operational mission.

Instructor Certified Events—Specialized training given to an aircrew member that requires an instructor to certify the student's attainment of the required proficiency and knowledge levels as specified in courseware and, if appropriate, AF Form 4111 (or MAJCOM-approved substitute). Instructor certified events are documented on the AF Form 4348 (or MAJCOM-approved equivalent).

Loadmaster—A crew member fully qualified to perform loadmaster duties.

Mission Design Series (MDS)—The official designation for aerospace vehicles used to represent a specific category of aerospace vehicles for operations, support, and documentation purposes.

Mission Events—The unit Defined Operational Capability Statement defines required crew capabilities. These capabilities, tactics, and events can be categorized as either Core or Special Mission.

Mission Ready (MR) Aircrew Member—An aircrew member who has satisfactorily completed IQT and MQT, and maintains qualification and proficiency in the command or unit operational mission.

Mission Qualification Training (MQT)—The training necessary to qualify a crew member in a specific crew position to perform the command or unit operational mission. MQT completion is a prerequisite for MR status.

Multiple Qualification—A crew member who is qualified in more than one MDS.

Non-current—Failure to meet the minimum prescribed currency requirements in a training period for a given event.

Non—Mission Ready (NMR) — Individual who is non-current in required continuation training or unqualified in the aircraft, or is not otherwise certified to perform the unit's mission(s). **Note:** BMC and BAQ crew members current, qualified, and appropriately certified are MR even though they may not be fully trained, qualified, or certified in all aspects of the unit's mission.

Primary Aircraft Authorization (PAA) —Aircraft authorized for performance of the operational mission. The PAA forms the basis for allocation of operating resources to include manpower, support equipment, and flying-hour funds. The operating command determines the PAA required for their assigned missions.

PAA Flying Hours— Flying hours flown in the MDS or like MDS (defined in individual Volume 1) and simulator time flown in the MDS or like MDS (defined in individual Volume 1).

Proficiency—The degree of skill achieved from accomplishing a prescribed minimum number of training events to accomplish the unit's mission.

Requalification Training—Training required to qualify crew members in an aircraft or mission in which they have been previously qualified.

Secondary Method Training (SMT)—Formal training conducted at a location not designated as an FTU using formal school SOI and courseware.

Special Mission Events—Mission events not designated as a core event. Some MR or MC crew members will carry additional qualifications in special mission events. Squadron CC or DO will determine which crew members will be qualified in these special mission events. Squadron CC or DO will determine if special mission events have affected C-rating and report variations through Status of Resources and Training Systems.

Total Flying Hours—Total flying hours for all aircraft flown in military service to include student and simulator time. Time accumulated must be in the aircrew member's current rating (i.e., pilot, navigator, etc.).

Training Status—A deficient status in which a crew member must fly under the supervision of an instructor when occupying a primary crew position. Once deficient items are corrected, the crew member is removed from training status.

Transition Training (TX) —Shortened version of qualification training for aircrew members cross-flowing from another military aircraft to allow credit for acquired aviation proficiency.

Upgrade Training—Training to qualify or certify a crew member in a higher crew qualification (i.e., mission pilot, instructor, or evaluator).

Volume—For the purposes of this manual, volume refers to the number of events an aircrew member must accomplish in a given period of time (i.e., quarterly, semiannually, or annually).

Weapon System Trainer (WST)—Device that provides synthetic flight and tactics environment, in which aircrews learn, develop, improve, and integrate skills associated with their crew position. In this manual, WST and simulator are synonymous.