

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



**AIR COMBAT COMMAND
INSTRUCTION 17-202, VOLUME 3**

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Cyberspace

**CYBERCREW OPERATIONS AND
PROCEDURES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Department of the Air Force Policy Directive (DAFPD) 17-2, *Cyberspace Warfare Operations*, and establishes Air Force (AF)-wide basic procedures for the operation of cyberspace weapons systems approved by the Chief of Staff of the AF. This publication applies to all Air Combat Command (ACC), AF Reserve Command (AFRC), Air National Guard (ANG), and third-party governmental and contract support agencies in accordance with (IAW) appropriate provisions contained in memoranda, support agreements and AF contracts. Refer to weapon system volumes (e.g., Air Combat Command Manual (ACCMAN) 17-2ACDV1) for specific training program requirements unique to individual and cybercrew positions. 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. Waiver authority for non-tiered paragraphs remains with ACC/Director of Operations (A3). Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor’s commander for non-tiered compliance items. Submit suggested improvements to this instruction on AF Form 847, *Recommendation for Change of Publication*, through unit channels, to ACC/A3/2/6K, acca326k.CyberandNonKineticOperationsDivision@us.af.mil. This publication may be supplemented at any level, but all Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located within the. This publication requires the collection and or maintenance of

information protected by 5 United States Code (USC), Section (§) 552a, *The Privacy Act of 1974*, as amended; departmental regulations; 37 USC, *Pay and Allowances of the Uniformed Services*; and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, as amended. Vigilance must be taken to protect Personally Identifiable Information when submitting or sending nominations, applications or other documents to Department of Defense (DoD) agencies through government Internet, software applications, systems, e-mail, postal, faxing or scanning. Refer to the AFI 33-332, *Air Force Privacy and Civil Liberties Program*, for additional guidance. Forms containing Personally Identifiable Information require Privacy Act Statements. System of Records Notice (SORN) F011 AF AFMC B, *Patriot Excalibur (PEX) System Records*, applies and is available at <https://dpcl.d.defense.gov/Privacy/SORNsIndex/DOD-Component-Notices/Air-Force-Article-List/>; SORN OPM/GOVT-1, *General Personnel Records*, applies and is available at <https://dpcl.d.defense.gov/Privacy/SORNsIndex/Government-Wide-Notices.aspx>. Compliance with **Attachment 1** is not mandatory.

SUMMARY OF CHANGES

Major changes include: The purpose of this rewrite is to remove references to lead command and change references to AF Form 4418, *Certificate of Cybercrew Qualification*; documentation to ACC Form 4418.

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1. General. This instruction establishes procedures for personnel assigned to AF cyber weapon systems.

1.1. Specific Applicability. This instruction applies to cybercrew members, defined as individuals who conduct cyberspace operations and are assigned to a specific cyberspace weapon system and position, including those who are augmenting standard weapon system units. Specific cybercrew positions for a given cyberspace weapon system may be found in the applicable weapon system policy. This publication also applies to members in formal training for immediate assignment to a cyberspace weapon system position. Mission Ready (MR)/Combat Mission Ready (CMR) certification applies to all military and civilian personnel who complete Initial Skills Training (IST), Initial Qualification Training (IQT) and Mission Qualification Training (MQT), have passed an evaluation and are certified by an appropriate certifying official. CMR requirements may apply to additional personnel at

selected units at the direction of Major Command (MAJCOM)/, or as defined in weapon system-specific guidance.

1.2. Crew Responsibility. This instruction prescribes operations procedures for cyberspace weapons systems under most circumstances, but it is not a substitute for sound judgment or common sense. As a general rule, except as noted in guidance that states an action “must” or “shall” be carried out, operations or procedures not specifically addressed in this instruction may be accomplished if they enhance safe, effective mission accomplishment and are approved for execution by appropriate command authorities.

2. Roles and Responsibilities

2.1. Mission Planning. Detailed mission planning helps ensure mission objectives are understood by all members and an effective plan is developed to achieve those objectives. In preparation for and prior to each sortie, crews will use tactical objectives provided through tasking orders and create tactical tasks for execution in the next sortie.

2.2. Responsibility.

2.2.1. Squadron commanders are responsible for allocating resources, time, and spaces for mission planning. Squadron commanders will establish unit specific mission planning guidance addressing mission essential tasks and will ensure an appropriate level of mission planning is conducted prior to each mission.

2.2.2. Squadron Directors of Operations (DOs) are responsible for ensuring all operations are planned, briefed, executed, and debriefed in accordance with Higher Headquarters (HHQ) and squadron standards.

2.2.3. The lead crew member is ultimately responsible for ensuring all aspects of mission planning are accomplished and all necessary members are present.

2.3. Procedures. Effective mission accomplishment requires thorough mission planning and preparation. Failures in execution often result from poor mission preparation; therefore, units will conduct thorough planning prior to every mission. General mission planning considerations are addressed in Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1/3-3, *Integrated Planning and Employment (IPE)*, or other weapon system specific AFTTP 3-1/3-3 volumes. While not directive, these manuals are useful in ensuring adequate mission planning and employment.

2.3.1. Units will accomplish planning in accordance with all regulations and authoritative guidance sufficient to ensure proper mission execution for all phases of operations. At a minimum, mission planning will include mission objectives and taskings, intelligence assessment on adversary tactics and relevant reporting, terrain, cancel/abort/rollback criteria, contingency plans, preplanned mission execution communications (also known as “contracts”), Rules of Engagement (ROE), risks, and applicable Special Instructions (SPINS). Rehearsal of Concepts (ROC) drills should be conducted as necessary. The Crew Information File (CIF) will be reviewed. **(T-3).**

2.3.2. Unit staff will provide crews sufficient time and resources to accomplish crew mission planning and mission briefing. Units will ensure other activities, such as recurring academic training, training device periods, additional duties, etc., do not interfere with time allotted for mission planning and crew mission briefing. The lead

crew member is ultimately responsible for the proper conduct of mission planning and must ensure sufficient time and materials are available to effectively plan the mission. **(T-2).**

2.3.3. All crew members will receive a sortie briefing.

2.4. **Debriefs.** Will be conducted after each sortie and at a minimum include whether tasks and objectives were met, lessons learned, identification of successes, new Tactics, Techniques, and Procedures (TTP) used, new procedures developed, anomalies encountered, and task completion status. **(T-2).** Using a “who, what, where, when, and why” framework is recommended to produce substantive and actionable debriefs.

2.5. **Intelligence Support.** Lead crew member will request support from unit level intelligence or wing intelligence on current intelligence pertaining to mission tasking. (as applicable)

3. Guidance and Procedures.

3.1. **Crew Logs.** The crew log is the official record of events that occur during a crew shift or sortie (live or simulated). The purpose of the log is to maintain an accurate and detailed record of all significant events, including any deviations from guidance in this instruction pertaining to operations occurring during each crew shift. Of primary importance are events that may result in follow-up actions.

3.1.1. Crew logs should include identification of on-duty personnel, major operational activities, significant communications, major system degradations, mission required system, Standard Operating Procedures (SOP), and/or TTP deviations, and other abnormal system responses. Maintain crew logs for historical reference for mission operations per AFRIMS RDS. **(T-3).**

3.2. **Crew Information File (CIF).** The CIF provides information essential to the conduct of operations and response to emergency conditions. The CIF centralizes significant, time-sensitive issues and ensures procedures are disseminated to operations personnel. All crew members are required to review the CIF and acknowledge completion prior to beginning crew duties. Refer to ACCI 17-202 Vol 2, *Cybercrew Standardization/Evaluation Program*, for information on the structure and content of the CIF. **(T-3).**

3.3. **Go/No-Go Procedures.** Units will establish a positive control system that ensures cybercrew members have completed all training and Standardization and Evaluation (Stan/Eval) items required for missions. Units will provide written guidance on this system.

3.3.1. As a minimum, the Go/No Go system will monitor:

3.3.1.1. Training and mission currency items required for duty IAW ACCI 17-202 Vol 1, *Cybercrew Training*, and ACCMAN17-2(Mission Design Series (MDS)) Vol 1.

3.3.1.2. Currency on all CIF (Volume 1, Part B) items.

3.4. **Briefing.** The lead crew member will ensure sortie briefing is accomplished. A successful sortie briefing covers mission objectives, assigns tactical tasks to achieve those objectives, and ensures all crew members understand the plan.

3.5. **Debriefing.** The lead crew member will ensure a debrief is accomplished for every sortie. The debrief will cover the following at a minimum; whether tasks and objectives were met, lessons learned, identification of successes, new TTP used, new procedures developed, anomalies encountered, and task completion status. When required, lessons learned and learning points will be generated and instructional fixes implemented.

3.6. **Policy and Guidance.**

3.6.1. Crew members will adhere to all HHQ directed procedures (e.g., Technical Orders (TOs)). **(T-2).**

3.6.2. The MAJCOM will generate guidance to address procedures or guidance not addressed in a TO or other directive.

3.6.3. Units will develop local procedures specific to their mission when operations fall outside existing HHQ guidance. Local procedures will not be used to re-create or consolidate existing directives or HHQ guidance.

3.6.3.1. Units will adhere to directions published in T.O. 00-5-1, *Air Force Technical Orders System* or any directed templates from HHQ when developing local Workcards, Checklists, and Job Guides.

3.6.4. Crew Aids. Units may develop local Crew Aids such as guides, charts, written procedures or other visual aids and processes to create operational procedures, to ensure comprehensive tasks are completed correctly when HHQ guidance does not exist. The squadron DO will review and recommend approval/disapproval of all locally developed crew aids. Local crew aids will be coordinated through Group Stan/Eval or equivalent and approved by the Group Commander or his/her designee. **(T-3).**

3.6.5. Briefing Guides. Units will develop local briefing guides to ensure all necessary items are covered prior to each mission. Group-level Stan/Eval, or the designated stan/eval entity, will determine minimum requirements for these guides and ensure standardization. **(T-3).**

4. **Crew Force Management.**

4.1. **Crew Rest, Fatigue Management and Duty Limitations.** This section prescribes mandatory crew rest and maximum duty periods (DP) for all personnel who operate AF cyberspace weapon systems. Basic guidance for fatigue management strategies and waiver authority procedures are also addressed.

4.1.1. DP begins when a crew member reports for a mission/sortie, briefing, or other official duty and ends with the completion of the sortie. **(T-3).**

4.1.2. The normal crew DP will not exceed 12 hours. **(T-3).**

4.1.3. The squadron commander or designated official may extend the maximum DP up to two hours to compensate for unplanned mission delays, provided the mission requirements justify the increased risk. Extended DP must be annotated in the appropriate log, at a minimum, detailing authorizing official and crew members affected. Mission or environmental needs requiring longer than a 14 hour DP require group commander approval.

Table 1. Maximum Duty Period Length.

Cybercrew	Hours
All cybercrew positions	12
<i>With Squadron Commander Approval</i>	14
<i>With Group Commander Approval</i>	>14

4.1.4. If safety or mission may be compromised by fatigue, regardless of authorized DP, the lead crew member will restrict duty time, extend crew rest periods, notify squadron leadership to generate alternate crews, or terminate a mission.

4.1.5. The crew rest period is a 10-hour non-duty period before the DP begins. Its purpose is to ensure the crew member is adequately rested before performing a cyberspace mission or mission-related duties. Crew rest is free time, and includes time for meals, transportation and the opportunity for eight hours of uninterrupted sleep. **(T-3).**

4.1.5.1. Any reduction from 10 hours crew rest requires pre-coordination for transportation, meals and quarters as necessary so crewmembers are provided an opportunity for at least eight hours of uninterrupted sleep. **(T-3).**

4.1.6. Crew rest is compulsory for any crew member prior to performing any crew duty on any cyber weapon system.

4.1.7. Each crew member is individually responsible to ensure they obtain sufficient rest during crew rest periods.

4.1.8. Any official business or duty that requires the active participation of a crew member, not during the DP, interrupts the crew rest period. This includes official business conducted via telephone or other electronic means. Intentional crew rest interruptions shall only be made under the most exceptional circumstances. If crew rest is interrupted, individuals will inform a supervisor and a decision will be made by the lead crew member for removal from the mission schedule, when necessary. **(T-3).**

4.2. Operations Scheduling. Units will publish, post and monitor schedules for the crew force and initiate changes to the schedules based on tracking of qualifications, certifications, restrictions, crew rest, and other factors as required to meet mission objectives. **(T-3).**

4.2.1. Operations schedulers should notify crew members of changes to scheduled operations no later than (NLT) 12 hours before scheduled show time. Make notifications as soon as practical after the change is official.

MARK H. SLOCUM, Maj Gen, USAF
Director of Operations

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

5 USC § 552a, *The Privacy Act of 1974*, 31 December 1974

37 USC, *Pay and Allowances of the Uniformed Services*, 7 September 1962

ACCI 17-202V1, *Cybercrew Training*, 21 January 2021

ACCI 17-202V2, *Cybercrew Standardization/Evaluation Program*, 21 January 2021

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

AFI 33-332, *Air Force Privacy and Civil Liberties Program*, 10 March 2020

AFTTP 3-1, *Integrated Planning and Employment*, 19 February 2019

AFTTP 3-3, *Integrated Planning and Employment*, 27 August 2018

DAFPD 17-2, *Cyberspace Warfare Operations*, 27 October 2020

EO 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, 22 November 1943

JP 3-12, *Cyberspace Operations*, 8 June 2018

T.O. 00-5-1, *Air Force Technical Order System*, 15 February 2019

Prescribed Forms

None

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

ACC Form 4418, *Certificate of Cybercrew Qualification*

Abbreviations and Acronyms

ACC—Air Combat Command

AF—Air Force

AFI—Air Force Instruction

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFTTP—Air Force Tactics, Techniques, and Procedures

ANG—Air National Guard

CIF—Crew Information File

CMR—Combat Mission Ready
DAF—Department of the Air Force
DO—Director of Operations
DoD—Department of Defense
DP—Duty Period
HHQ—Higher Headquarters
HQ—Headquarters
IQT—Initial Qualification Training
IST—Initial Systems Training
JP—Joint Publication
MAJCOM—Major Command
MDS—Mission Design Series
MQT—Mission Qualification Training
NTL—No Later Than
NR—Mission Ready
OPR—Office of Primary Responsibility
RDS—Records Disposition Schedule
ROC—Rehersal of Concept
ROE—Rules of Engagement
SOP—Standard Operating Procedures
SORN—Systems of Record Notice
SPINs—Special Instructions
Stan/Eval—Standardization and Evaluation
TO—Technical Order
TTP—Tactics Techniques and Procedures
USAF—United States Air Force

Terms

Certification—Procedure used to document competency in a particular task. Not interchangeable with “qualification”, which requires ACC Form 4418, *Certificate of Cybercrew Qualification*, documentation.

Checklist—A type of job aid used to reduce failure by compensating for potential limits of human memory and attention. It helps to ensure consistency and completeness in carrying out a task.

Combat Mission Ready—The status of a combatant cybercrew member who has satisfactorily completed mission qualification training and maintains qualification and proficiency in the command or unit operational mission.

Crew Aid—A sign, worksheet or other object which includes diagrams or a brief summary of instructions, such as a checklist. Designed to reduce avoidable mistakes by helping a person remember what to do, or be sure that they have completed all steps required. Frequently used to support or replace training.

Cyberspace Operations—The employment of cyberspace capabilities where the primary purpose is to achieve objectives in or through cyberspace. (JP 3-12)

Information Assurance (IA)—Measures that protect information and information systems by ensuring their availability, integrity, authentication, confidentiality, and nonrepudiation.

Lead Crew Member—Member responsible for mission execution. Refer to Model/Design/Series (MDS) specific instructions for name/definition.

Mission—Unit objective encompassing one or more sorties to conduct operations within cyberspace.

Mission Ready—The status a non-combatant cybercrew member who has satisfactorily completed mission qualification training and maintains qualification and proficiency in the command or unit operational mission.

Qualification Evaluation—Qualifies a cybercrew member to perform the duties of a particular crew position in the specified MDS. Requires ACC Form 4418 documentation

Sortie—In cyberspace operations, a directed operational execution by one cybercrew to accomplished a tasked mission or effect.

Technical Order—A document that contains operational or maintenance instructions, parts lists or parts breakdown, or other related technical information or procedures (exclusive of administrative procedures) for a weapon system, weapon system component, support equipment or other item procured by DoD. This data can be presented in any form (e.g., hard copy, audio and visual displays, magnetic tape, disks, or other electronic devices). The term Technical Order is equivalent to the DoD term Technical Manual.