

**BY ORDER OF THE COMMANDER
505TH COMMAND AND CONTROL
WING (ACC)**

**505 COMMAND AND CONTROL WING
INSTRUCTION 99-101**

11 JUNE 2020

Test and Evaluation

**OPERATIONAL TEST AND
EVALUATION**



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RELEASABILITY: There are no releasability restrictions for this publication.

OPR: 505 CTG/TA

Certified by: 505 CCW/CC
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Supersedes: 505 CCWI 99-101, 24
September 2012

Pages: 10

This instruction implements policy for the 505th Command and Control Wing (CCW), identifies responsibilities, and provides basic guidance for planning, executing, and reporting operational tests in the 505 CCW. This instruction implements direction from higher headquarters instructions AFPD 99-1, AFI 99-103, ACCI 99-101, and AFMAN 63-119 and applies to all units within the 505 CCW. This instruction designates the 605th Test and Evaluation Squadron (TES) as the focal point for test project management activities in the 505 CCW. Detailed process guidance is found in the 605 TES Operational Test (OT) Guide. It does not apply to the Air Force Reserve (AFR) and Air National Guard (ANG), except where noted otherwise. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s through 3666 Tyndall Ave, Building 217, Nellis Air Force Base, Nevada 89191; 505ctg.cce@us.af.mil. 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 AFI 33-360, Publications and Forms Management, Table 1.1 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. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFI 33-322, Records Management and Information Governance Program and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This revision reflects unit name changes and hierarchy based on the 1 Aug 2019 approved organizational change request for the 505 CCW. It removes the purpose and definitions of test, along with unit mission statements, all are provided in detail in other documents. This revision alters the responsibilities for test management by delegating to the 605 TES/CC responsibility for test and evaluation within the 505 CCW, including oversight of all test projects. Deletes

references to the 133d Test Squadron (TS). Deletes Air Combat Command (ACC) monitored test events from ACC Test Categories. This revision also adds clarification to the major process steps for accomplishing the operational test and evaluation (OT&E) mission within the 505 CCW.

Chapter 1

AUTHORITY

1.1. Operating Instructions . The authority of the 505 CCW to conduct operational testing of command and control (C2) and ancillary systems and processes is derived from AFI 99-103, *Capabilities-Based Test and Evaluation*; ACC 99-101, *ACC Test and Evaluation*. HAF/TE is the Air Force OPR. ACC/A5TT is the ACC OPR. US Air Force Warfare Center (USAFWC)/A8 is the USAFWC OPR. The 505th Combat Training Group (CTG)/TA is the 505 CCW OPR,

1.2. ACC Test Categories

1.2.1. **Wing Conducted.** The ACC operational test support request (OTSR) directs the 505 CCW to execute the project as the operational test organization (OTO).

1.2.2. **Wing Supported.** The ACC OTSR directs the 505 CCW to support another test agency as a participating test organization (PTO).

1.3. Funding Sources.

1.3.1. **ACC Baseline Funding.** Operations and maintenance (O&M) funding for unit operations is distributed to the 505 CCW by ACC.

1.3.2. **ACC Project Funding.** Project-specific funds are requested from ACC by program element, budget category, and fiscal year in the OTSR along with weapons systems and materiel resources needed to execute the test. ACC approval of the OTSR does not assure the funding allocation will support the complete effort, thereby requiring financial managers (FM), resource advisors (RA), and project managers (PM) to make annual estimates of project costs. Test units will include these project budget estimates in the annual budget requests to ensure some correlation between test priorities and the annual funding allocations.

1.3.3. **External Funding.** Other potential sources of funding include program executive offices (PEO), Air Force Research Laboratory (AFRL), Air Force Operational Test and Evaluation Command (AFOTEC), Air Force Global Strike Command, and other major commands (MAJCOM) and Services. These funds are designated for use with specific programs and projects and necessitate careful oversight of expenditures.

Chapter 2

ROLES AND RESPONSIBILITIES.

In addition to the responsibilities identified in Air Force, ACC, and USAFWC instructions, the following responsibilities apply within the 505 CCW.

2.1. 505 CCW/CC.

2.1.1. Oversees the OT&E mission and functional area to ensure safe, efficient, and effective planning, execution, and reporting of 505 CCW assigned tests.

2.1.2. Provides subordinate commanders with sufficient resources and access to the wing staff as necessary to ensure safe, efficient, and effective planning, execution, and reporting of 505 CCW-assigned test.

2.2. 505 CCW/FM. Ensures test project funds are included in the budget request to ACC to support each project planned for the fiscal year.

2.3. 505 TTG/CC.

2.3.1. Accepts project tasking from ACC/A5T.

2.3.2. Approves quarterly and end of year reports to ACC.

2.3.3. Submits test documentation and fielding recommendations for 505 CCW/CC approval for projects identified by Director, Operational Test and Evaluation (DOT&E) for oversight, or have special interest to the 505 CCW/CC.

2.4. 505 TTG/RA. Consolidates annual test project funding requests from squadrons for submission to the 505 CCW/FM.

2.5. 505 CTG/TA.

2.5.1. Serves as OPR for project tasking from and reporting to ACC/A5T.

2.5.2. Serves as OPR for internal coordination of 505 CCW test efforts and issues with the USAFWC.

2.5.3. Participates in the ACC test priority list (TPL) integrated product team (IPT) conferences.

2.5.4. Solicits, prepares, coordinates, and publishes updates to this instruction (in close coordination with the 605 TES).

2.6. 605 TES/CC.

2.6.1. Is responsible for test management and execution.

2.6.2. Oversees test project management, execution of assigned tests, and monitors and reports the progress of assigned tests.

2.6.3. Maintains the test team training curriculum for PMs, cybersecurity testers and operations analysts (OA) and conducts training as needed to ensure test team members are trained to perform the duties of their respective project assignments.

- 2.6.4. Appoints the 605 TES core and additional test team members for each test project; requests core and additional team members and resource support from the 505 TTG/CC as appropriate for the project.
- 2.6.5. Verifies that systems to be tested are certified ready for operational testing in accordance with AFMAN 63-119 prior to test execution.
- 2.6.6. Oversees the process for internal review of all test project documentation.
- 2.6.7. Ensures the annual budget of the organization includes budget estimates necessary for each projected test project and coordinates with outside agencies for externally funded projects.
- 2.6.8. Staffs for approval authority for test documentation and fielding recommendations of Air Force test projects identified by DOT&E for oversight in accordance with ACCI 99-101.
- 2.6.9. Acts as the wing approval authority for test documentation and fielding recommendations of wing test projects for the 505 CCW/CC. Delegates approval authority for test documentation and fielding recommendation as required.
- 2.6.10. Ensures the distribution of approved documentation to the appropriate organizations.
- 2.6.11. Receives a test readiness review briefing prior to the execution of a test unless approval to execute is retained by the 505 TTG/CC or 505 CCW/CC.
- 2.6.12. Exercises direct liaison authorized (DIRLAUTH) with MAJCOMs, test organizations, and associated test teams.
- 2.6.13. Publishes a quarterly project status and forecast.
- 2.6.14. Solicits, prepares, coordinates, and publishes updates to the 605 TES OT Guide.

2.7. PM.

- 2.7.1. Reviews OTSRs in support of 505 TTG/CC project tasking by ACC/A5T.
- 2.7.2. Manages the assigned test project and acts as the single point of contact for coordination.
- 2.7.3. Coordinates with the ACC project officer and acquisition program manager, as necessary, to ensure the project purpose, approvals, clearances, certifications, requirements, recommendations, and funding are appropriately addressed.
- 2.7.4. Coordinates the appointment of test team members and requests for support.
- 2.7.5. Establishes and maintains a case folder for the test project.
- 2.7.6. Provides a test readiness review to the 605 TES/CC prior to test execution.
- 2.7.7. Develops test documentation necessary for planning, execution, and reporting.
- 2.7.8. Ensures an environmental impact assessment is documented and mitigation efforts are addressed in the readiness review and test plan.
- 2.7.9. Ensures a safety/operational risk assessment is documented and mitigation efforts are addressed in the readiness review and test plan.
- 2.7.10. Complies with guidance outlined in the 605 TES OT Guide.
- 2.7.11. Nominates qualified and experienced test team members for PM certification.

2.8. 705th Combat Training Squadron (CTS)/CC:

2.8.1. Designates test team members and resources as appropriate to support the 605 TES/CC.

2.8.2. Supports project planning, execution, and reporting efforts of the 605 TES/CC.

2.9. 84th Radar Evaluation Squadron (RADES)/CC:

2.9.1. Designates test team members and resources as appropriate to support the 605 TES/CC.

2.9.2. Supports project planning, execution, and reporting efforts of the 605 TES/CC.

2.10. 805 CTS/CC:

2.10.1. Designates subject matter experts and resources as appropriate to support the 605 TES/CC.

2.10.2. Supports project planning, execution, and reporting efforts of the 605 TES/CC.

Chapter 3

TEST PROCESS.

3.1. Test Team.

3.1.1. The PM, cybersecurity testers and lead OA constitute the core test team. The PM and OA are appointed by the 605 TES/CC from squadron personnel to ensure accountability to the chain of command. The PM will direct the test team and assign responsibilities to team members to ensure all aspects of planning, execution, and reporting are accomplished. The OA assumes the role of primary test designer, data manager, and data analyst to address the appropriate measures, data collection and analysis methods, and reporting schema.

3.1.2. Operational suitability analysts (OSA) may be added to the test team to identify reliability, availability, and maintainability (RAM) of the system and other suitability measures and methods that capture performance results of the systems and human interactions with those systems.

3.1.3. Systems and operations subject matter experts may be added to the test team to provide current operational perspectives on issues relevant to the solution being evaluated and to guide the test planning effort toward real-world operational needs.

3.1.4. Event controllers may be added to the test team to assure adherence to the test objectives and provide two-way communications with system operators and real-time monitoring for safety or data quality.

3.1.5. Data collectors may be added to the test team to capture qualitative or quantitative data directly at the source or to monitor performance of an automated data collection system.

3.2. Project Tasking. ACC A5/8/9 approved operational test support requests (OTSR) and validated tactical improvement proposals (TIPs) are placed on the ACC TPL to identify authorized test efforts of the 505 CCW as described in the ACC instruction. OTSRs are drafted anytime during the year, as the OTSR process is a continuous process. The OTSR once approved and with a signed test plan, serves as the authority to test.

3.3. Project Initiation. The PM creates a project folder as a repository for tasking, research, operating manuals, test documentation, and test products.

3.4. Project Planning. Project test plans provide sufficient detail to identify the scope of the project in terms of operational issues and objectives to be addressed, schedule, resource requirements to support the project, data collection and management requirements, analysis methods to be employed, and management procedures to be used in executing the project. Detailed test plans or procedures may be developed to address individual test events, specific data management activities, or specific operational objectives as supplements to the project plan.

3.5. Project Execution. The initial step in this phase is the test readiness review approval by the appropriate commander. The final step in this phase is the analysis and review of the data. The PM is accountable for the safe and thorough management of test events and activities, including personnel travel, transportation and maintenance of equipment, compliance with venue rules and regulations, safety of flight and ground operations, capture and retention of data, and information and operations security. Test team members appointed to specific supporting roles will ensure the

PM has relevant, timely information to make decisions about the initiation, continuation, or termination of test events.

3.6. Project Reporting. Final reports are submitted by the PM within 45 calendar days of completion of the execution phase for coordination and signature by the appropriate approval authority unless an earlier response is required by a milestone decision authority. Interim summary reports may be submitted in the case where a milestone, funding, contract award, or fielding recommendation decision is required prior to routine issuance of the final report. Fielding recommendations for system assessments and evaluations will routinely accompany or be included in the report.

3.7. Document Distribution. Responsibility for primary (initial) distribution of test documents resides with the 605 TES Test Management Flight (DTM). The 605 TES/DTM will conduct primary distribution of test documents to appropriate T&E stakeholders, place test documents in the 605 TES technical repository (library) for information sharing with T&E stakeholders having a direct and immediate interest in outcomes of the 605 TES conducted T&E. The 605 TES/DTM will archive all test plans and reports in the Defense Technology Information Center (DTIC) Technical Library as outlined in ACCI 99-101.

3.8. Project Closeout. The PM will ensure tactics, techniques, and procedures (TTP), training materials, and briefings are provided to the appropriate systems managers, operators, and tactics/training offices. The 605 TES/DTM will initiate project closeout with ACC/A5/8/9/A5TT through the established quarterly report process outlined in ACCI 99-101. The PM reviews and tailors the project folder and archives the project folder in compliance with the Air Force Records Information Management System (AFRIMS).

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Commander

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

AFPD 99-1, *Test and Evaluation*, 19 Jun 2018

AFI 99-103, *Capabilities-Based Test and Evaluation*, 17 Nov 2019

ACCI 99-101, *ACC Test and Evaluation*, 26 Jun 2018

AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Testing*, 25 Apr 2019

Prescribed Forms

None.

Adopted Forms

AF Form 847, Recommendation for Change of Publication

Abbreviations and Acronyms

ACC—Air Combat Command

ACCI—Air Combat Command Instruction

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFOTEC—Air Force Operational Test and Evaluation Command

AFPD—Air Force Policy Directive

AFRIMS—Air Force Records Information Management System

AFRL—Air Force Research Laboratory

C2—Command and Control

CCW—Command and Control Wing

CTG—Combat Training Group

CTS—combat training squadron

DIRLAUTH—direct liaison authorized

DTIC—Defense Technology Information Center

DTM—test management flight

DOT&E—Director, Operational Test and Evaluation

FM—financial management

IPT—integrated product team

MAJCOM—major command

OA—operations analyst

OPR—office of primary responsibility

OSA—operational suitability analyst

OT—operational test

OTO—operational test organization

OTSR—operational test support request
PEO—program executive office
PM—project manager
PTO—participating test organization
RA—resource advisor
RADES—radar evaluation squadron
RAM—reliability, availability, and maintainability
T&E—test and evaluation
TA—technical advisor
TTG—test and training group
TES—test and evaluation squadron
TPL—test priority list
TS—test squadron
TTP—tactics, techniques, and procedures
USAFWC—United States Air Force Warfare Center