



# 505th Command and Control Wing **CAPABILITIES GUIDE**



C2 for the Future - Looking Forward and Leading the Way

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# INTRODUCTION

Welcome to the 505th Command and Control Wing! We are dedicated to delivering C2 combat capability to warfighters worldwide. We were organized as a Wing in 2004, but we've been delivering C2 combat capability to warfighters for decades. Most recently, in 2010, the Commander of Air Combat Command signed our first *Mission Directive* detailing our many mission sets. It is ACC Mission Directive 205, Vol 3 and is available at <http://www.e-publishing.af.mil/shared/media/epubs/ACCMD205V3.pdf>. Now is the perfect time to circulate this *Capabilities Guide*, as we execute those missions on behalf of our joint warfighting partners, delivering command and control testing, tactics development, and training.

The 505th Command and Control Wing, organized under the United States Air Force Warfare Center, is headquartered at Hurlburt Field, Florida, and has two subordinate groups and one detachment.

Detachment 1, 505th Command and Control Wing, located at Fort Leavenworth, Kansas, is focused on providing liaison and exercise support to the Combined Arms Center on air, space, and cyber power employment and directly supporting the Army's Battle Command Training Program.

The 505th Training Group, co-located with the Wing Headquarters at Hurlburt Field, is focused on getting operations center crews and staffs, including joint and coalition personnel, qualified and ready to take on their roles in the field. It also provides opportunities to gain, maintain, and enhance currency and proficiency after achieving combat mission ready or certified status. The Training Group has four subordinate squadrons and an Advanced Programs Office and focuses on the integration of air, space, and cyber. Improved integration of systems, processes, and people in training means better integration across the full range of military operations when our forces are put into action. From initial qualification training to continuation training and advanced training for C2 operators, staffs, and technicians, the 505th Training Group will satisfy your training requirements.

The 505th Test and Evaluation Group is headquartered at Nellis Air Force Base, Nevada, and is focused on the integration of systems, processes, and people in operations and training. The Test and Evaluation Group has four subordinate squadrons and two squadron detachments. Squadron missions range from support to operational test and evaluation and experimentation, to distributed mission operations and training as well as the monitoring, evaluation, and optimization of long-range radar in support of geographic Combatant Commanders.

This *Capabilities Guide* is for use by all our mission partners to better understand the capabilities we deliver. The vision, mission, and capabilities outlined in this guide are the fundamental tenets by which we fulfill our role to ensure the operational-level and tactical-level units of the Air Force are prepared to conduct combat operations as a Joint team across a broad spectrum of conflict. They offer a conceptual foundation for ensuring we maintain a long-term strategy, and are the vital mechanism to successfully innovate, integrate, and incorporate air, space, and cyber war fighting capabilities across the United States Air Force. I invite you to examine this guide...your *Capabilities Guide*, and see how we are postured to satisfy your requirements. I look forward to serving you.



MUSTAFA R. KOPRUCU, Colonel, USAF  
Commander, 505th Command and Control Wing



# United States Air Force Warfare Center



## Key Partners



# *United States Air Force Warfare Center*

## *Mission*

Operational Testing, Tactics Development, and  
Advanced Training in Air, Space, and Cyberspace

## *Vision*

Preparing Airmen for the Joint fight – providing the Joint Force  
Commander with highly skilled Airman, effective weapons, and  
effective command and control of air, space, and cyberspace

## *Priorities*

- Analyze Adversaries - coordinate an “Aggressor Force” to provide realistic and relevant opposition for training exercises, operational test and evaluation, and tactics development at the operational and tactical levels
- Certify Equipment - provide weapons systems certified for integrated combat operations to the Air and Space Component Commanders and their MAJCOMs
- Define Tactics - provide single source, joint, integrated, and definitive combat employment tactics for all USAF forces
- Train Leaders - train the future operational and tactical leaders of the USAF through advanced educational and tactical courses
- Enhance Performance - provide directed, joint, integrated warfighting, cross-domain exercise, and composite training venues for operational and tactical units from the USAF, sister services, and Coalition partners

*The 505th Command and Control Wing is organized directly  
under the United States Air Force Warfare Center,  
headquartered at Nellis Air Force Base, Nevada.*





## 505th Command and Control Wing

Detachment 1,  
84th Test and Evaluation Squadron  
(AFR)

Detachment 1, 505 CCW  
Combined Arms Center

Army Joint Support Team

### 505th Training Group

OCTP

505th Training Squadron

705th Training Squadron

505th Combat Training Squadron

505th Communications Squadron

### 505th Test and Evaluation Group

505th Test Squadron

705th Combat Training Squadron

605th Test and Evaluation Squadron

Detachment 1, 605 TES

Detachment 2, 605 TES

84th Radar Evaluation Squadron

# *505th Command and Control Wing*

## *Mission*

Improve Warfighter Capability through Command and Control Testing, Tactics Development, and Training

## *Vision*

Delivering highly trained Airmen and integrated Command and Control of Air, Space, and Cyberspace to the Joint Force Commander

## *505 CCW Priorities/Tasks*

- Provide training for Component Numbered Air Force Headquarters
- Provide training opportunities for C2 and Intelligence, Surveillance, and Reconnaissance systems and personnel in addition to C-NAF
- Provide liaison and exercise support to the CAC on air, space, and cyberspace power employment with direct support to the Battlefield Command Training Program
- Provide JNTC Air, Space, and Cyber employment liaison to USJFCOM directed training, joint/coalition service training, and other events as directed by USAFWC
- Support ACC implementation of Operational Warfighter initiatives as directed by the Operational Warfighter/Coal Warfighter Roadmap
- Support development of Distributed Mission Operations capabilities for the AF and support integration of multi-level security/cross domain solution to allow full participation by AF assets and in support of joint and coalition participation in testing, tactics, and training
- Enhance operational-level C2 through the tactics development program
- Provide support to C2 and ISR capability development through participation in forums such as the AOC operational review board, AOC Requirements Review Board, and the Combat Air Forces Realistic Training Review Board
- Support C2 and ISR evolutionary acquisition and Operational Test for C2ISR weapons systems, including: E-3B/C AWACS, E-8C Joint STARS, AOC, TBMCS FL, TBMCS UL/UC2, PR C2, TACP, and Control and Reporting Center
- Provide live-fly planning, modeling and simulations, control, and assessment support to Joint Expeditionary Force Experiment and other experimentation as directed by USAFWC
- Monitor, evaluate and optimize long-range radar in support of geographic Combatant Commanders as tasked by HHQ
- Integrate Air, Space, and Cyber into 505 CCW test, tactics development, training, and exercise planning and execution events

*Focusing on Command and Control  
and integration of Air, Space, and  
Cyber capabilities*

# 505 CCW History

## Post WW-II

The 505th Command and Control Wing's unique history dates back to the establishment of the 505th Aircraft Control and Warning Group (ACWG) on 2 May 1947. Starting at McChord Field (later Air Force Base), Washington, the group activated and aligned under the Air Defense Command becoming the first post World War II air control and warning unit. For the remainder of 1947, the group supported two radar stations, one at Arlington, Washington, and one at Half Moon Bay near San Francisco, California. These stations worked with fighter squadrons to perfect ground-control and interception techniques. The group included a fleet of B-25 "Mitchells" used extensively to perform radar calibration flights. The experience gained from operating the two sites proved invaluable to air defense planners who were in the process of designing a nationwide early warning radar network.

As tensions increased between the US and Communist Russia, the importance of the 505th mission grew. In September 1949, the group no longer operated B-25's yet they remained focused on early warning systems, supporting detachments up and down the Pacific Northwest coast. The group provided early warning operating radar systems to include the AN/TPS-1. With a growing movement to assign homeland defense to reserve units, the 505 ACWG was inactivated on 6 February 1952. However, this would not mark the end of the 505th. The Air Force would revive the unit and its expertise with radars 13 years later.



**BLUE FLAG**  
(Begins in 1977)

**SEARCH  
AND  
DIRECT**



505 ACWG

505 TCG

505 TCG

1945

1947

1952

INACTIVE

1965

1965

1973

INACTIVE

## Southeast Asia

On 2 November 1965, the 505 ACWG re-designated and activated as the 505th Tactical Control Group (TCG). Replacing the 6250th Tactical Air Support Group that activated three months earlier, 505 TCG called Tan Son Nhut Airfield in South Vietnam, home. The 505th was responsible to provide Command and Control, for the Tactical Control System in Southeast Asia (SEA). This mission included the operation of numerous radar sites throughout South Vietnam and Thailand from 1965 to 1973. In addition to the radar sites, the group managed O-1 "Bird Dogs" assigned to five squadrons from late 1965 through 1966. These O-1 units included the 19th, 20th, 21st, 22nd, and 23d Tactical Air Support Squadrons operating from various bases throughout SEA. Forward Air Controllers (FAC) flew the "Bird Dogs" to find and mark enemy activity, direct air strikes, and perform battle damage assessments.

Initially assigned to the Second Air Division in Vietnam, the 505th re-aligned under the Seventh Air Force on 1 April 1966. Soon afterward, the 505th received approval for its emblem and official motto - "Search and Direct." The group eventually lost its flying squadrons, but the radar mission grew. The 505th distinguished itself as the only unit to furnish all of SEA an electronics ground environment system for aircraft control and warning and radar services. After eight years of service in Vietnam the group earned thirteen campaign streamers and five Air Force Outstanding Unit Awards with Combat "V" devices. Unfortunately, with the end of the war in 1973, came the unit's inactivation.



## 1980 and Beyond

The 505th's lineage continued with the activation of the 4442d Tactical Control Group on 1 March 1980. Functioning as the 4442d, the unit aligned under the USAF Tactical Air Warfare Center. The group established a headquarters at Hurlburt Field, Florida where it managed a command, control, communications (C3), and intelligence complex. Along with the C3 operations, the unit conducted operational tests and evaluated tactical air control elements. They also provided training on tactical air control and operated the USAF Air Ground Operations School until 1997. Although, remaining at Hurlburt since 1980; the 505th received several name changes to match the evolution of its mission.



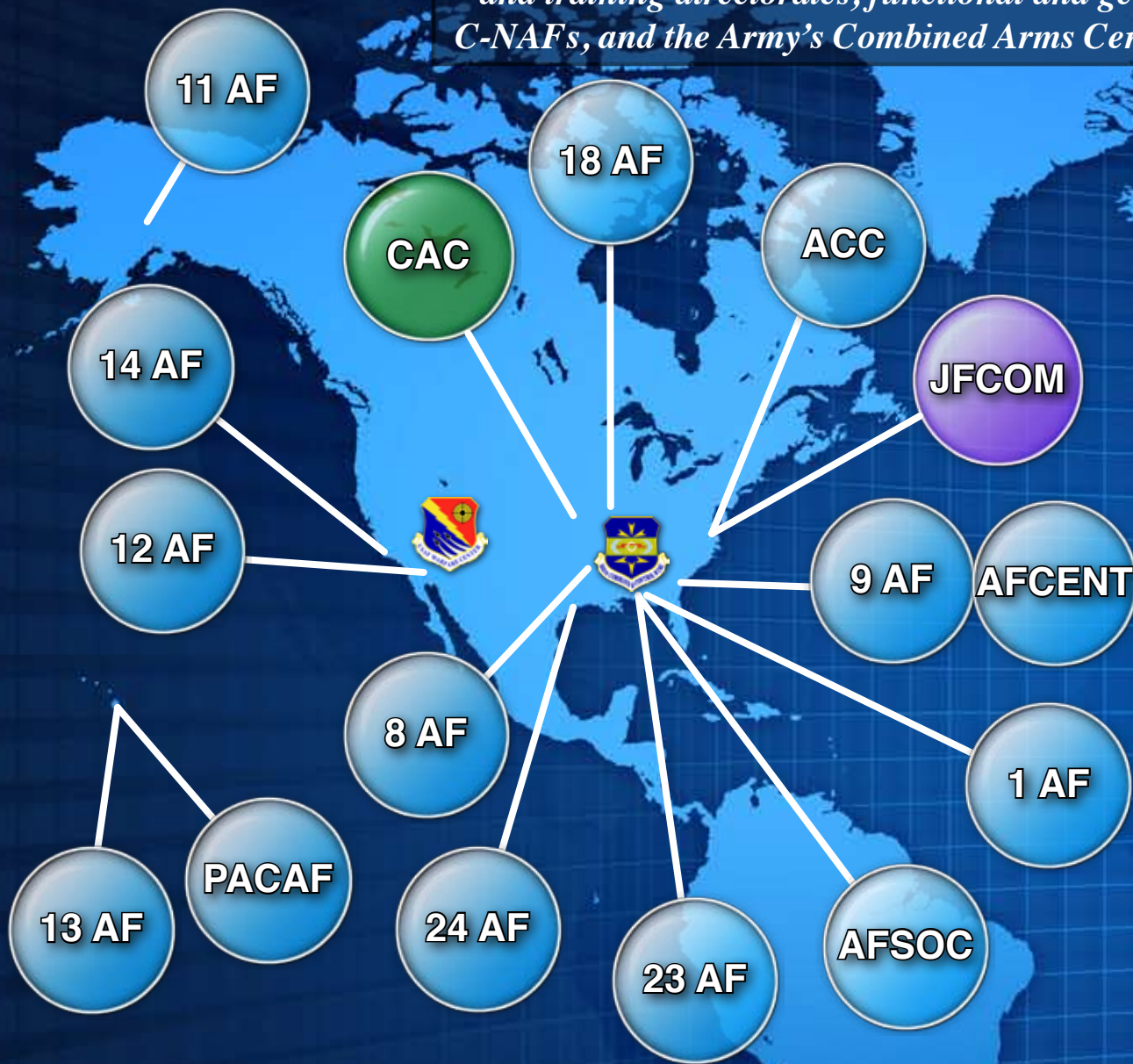
With the restructure of MAJCOMs in 1991/92, came the unit re-designation as the 505th Air Control Group. In April 1993, the 505th began operating the new USAF Battlestaff Training School; the Air Force re-designated the unit 505th Command and Control Evaluation Group. At the same time, the mission expanded to include a new detachment at Kirtland AFB, New Mexico. By 1998, with the ever-increasing importance of the Air Operations Center as a weapons system and the units expanding mission to train personnel in its use, the Air Force again changed the 505th's name, this time to the Air Force Command and Control Training and Innovation Center. The center continued to test new command and control systems and train personnel on their use in combat. Realizing that the center now incorporated more than just a building with several detachments located around the US, the Air Force gave it group status on 15 April 1999.

The group carried its mission into the 21st century providing modern training and techniques to increase the command and control capabilities at the operational level of the Air Force. The group transitioned to a wing-level organization on 12 March 2004. Now the 505th Command and Control Wing, it controls two groups: the 505th Training Group at Hurlburt Field and the 505th Test and Evaluation Group at Nellis AFB. It spans 13 locations across the continental US with over 1000 military, civilian, and contractor personnel providing operational level C2 testing, tactics development, and training across Air, Space, and Cyber domains.



# Warfighter Customers

505 CCW Warfighter customers include Joint Forces Command, HAF C2 and training staffs, MAJCOM C2 and training directorates, functional and geographic C-NAFs, and the Army's Combined Arms Center (CAC)



505 CCW supported 398 events in 2010 providing direct or indirect tactical- and operational-level training for 140,328 people



## Key Capabilities

### BLUE FLAG

- Training C-NAF CC and staff at the operational level with up to three joint accredited exercises per year

### VIRTUAL FLAG

- Exercise all elements of the Theater Air Ground System using Live Virtual Constructive capabilities
- Four scenarios annually from Major Combat Operations to Irregular Warfare in a joint/coalition environment
- Provides operational-level C2 node for Distributive Mission Operations (DMO)

### Homeland Defense and Radar Evaluations

- Integrated staff provides real-time national radar picture and detailed analysis to Nation's three Air Defense Sectors
- Evaluates, optimizes, and tests homeland defense and tactically deployed long-range radars to deliver the most sensitive, effective integrated radar picture

### Army Combat Deployment Prep/MRXs

- Provides Army Battle Staffs (CORPS, DIVS, BDES) final Theater Air Ground System training before combat deployment to ensure integration with all joint air capabilities

### Warfighter Focused Events (WFE)

- Multiple distinct mission threads developed from warfighter requirements; focuses on small scale team training with multi-level security
- Integrates joint and coalition forces to support warfighter readiness and requirements

### Joint Expeditionary Force Experiment

- Provides planning, execution, live-fly, modeling and simulation, and architecture support to assess AF experiments

### Test and Evaluation

- Conducts operational test for AOC, AWACS, JSTARS, CRC, ADS, TACP, and DCGS
- Conduct tactics development and evaluations to optimize the combat effectiveness of the TACS and ISR systems

### CCDR Support (Professional Control Force, Modeling and Simulation, AOC Response Cell)

- UNIFIED ENDEAVOR, TERMINAL FURY, AUSTERE CHALLENGE, KEY RESOLVE, ULCHI FREEDOM GUARDIAN, NORTHERN EDGE, among others

### RED FLAG

- Provides AOC warfighters advanced training in a dynamic, live-fly environment
- Exercises tactical and operational-level AOC combat operations division processes using the plan, brief, exercise, debrief methodology
- Explores dynamic targeting, personnel recovery, and data link processes in a live, joint/coalition environment

### AOC and AFFOR Staff Training

- Operator and Technician Initial Qualification Training across all five divisions of the AOC and fundamental training for the intermediate ranks in the AFFOR Staff directorates

### C2 Warrior Advanced Course

- Trains joint personnel in advanced integration of air, space and cyber capabilities and TTP

### Senior Level C2 Training

- SAASS AOC Senior Staff Course
- Combined/Joint Air and Space Operations Senior Staff Course
- Combined/Joint Force Air Component Commander Course

### Joint Air Operations C2 Course

- C2 Training for joint O-5 and below personnel including AOC liaison officers who require introductory training in air tasking order production, dissemination and monitoring

### Special Technical Operations Training

- Joint SAP/SAR IQT and program administrator training

3 AF

USAFE

17 AF

7 AF

# 505th Training Group

Hurlburt Field, Florida



## Mission

The mission of the 505th Training Group (505 TRG) is to develop air, space, and cyber operational level C2 professionals through integrated Joint and Coalition education and training. In addition to running the Air Force's only Air and Space Operations Center Formal Training Unit, the 505 TRG is responsible for teaching senior-level AOC courses, supervising the Operational Command Training Program, and through the 505th Communications Squadron, providing communications and information technology support across all wing organizations.

## 505th Training Group

Operational Command Training Program (OCTP)

505th Training Squadron

705th Training Squadron

505th Combat Training Squadron

505th Communications Squadron

## Key Programs

AOC Formal Training Unit

Senior Leader/STO AOC Courses

Operational Command Training Program

Advanced Programs

Special Technical Operations IQT

Operational Warfighter/Coal Warfighter

Wing-Wide Security

Wing-Wide Communications Support

C2 System and Process Mobile Training Teams

Part Task Trainer





# Operational Command Training Programs (OCTP)

OCTP is a CSAF-chartered program, executed by the 505 CCW through the OCTP Director, the 505 TRG Commander. The OCTP director executes the program through the 705 TRS/OCTP office.

OCTP is the CSAF's long-term operational level of war training program intended to provide peer-level performance feedback to Combined/Joint Force Air Component Commanders (C/JFACC) and the Air and Space Operations Center crew, enhancing their skills at the operational level of war. OCTP also focuses on the Air Force Forces Commander and staff. The program focuses on the pivotal role of the Air and Space Expeditionary Task Force (AETF) Commander and the diverse functional responsibilities of the AETF staff in operational planning and execution. OCTP is not an evaluation program, but rather a training and education program using group academics and individual observations and recommendations by experienced operational air and space warfare professionals during Joint and Service operational-level exercises. OCTP is geared to support operational-level exercises, such as BLUE FLAG, ULCHI FREEDOM GUARDIAN, KEY RESOLVE, TERMINAL FURY, AUSTERE CHALLENGE, and VIRTUAL FLAG/RED FLAG. OCTP also provides subject matter expertise during C2 academic courses such as the JFACC Course, Joint Air Operations Senior Staff Course, and C2 Warrior Advanced Course.

*To accomplish its objectives, OCTP is divided into two tiers. The two tiers are complementary and are designed to work together to provide an operational-level focus to Air Force training audiences in exercises, experiments, and C2 academics.*



## Advanced Programs (AP)

The AP office is the 505 CCW's agency responsible for the incorporation of compartmented capabilities within the Air and Space Operations Center. As part of the 505th Training Group, it is located on the campus of the 505 CCW at Hurlburt Field, FL.

AP provides specialized and compartmentalized C2 dominance to joint and coalition warfighters through testing, tactics development, training, distributed missions operations, and experimentation. This improves and standardizes specialized combat capabilities into training and exercises for C2 warfighters, testing and experimentation of their systems and processes, and documentation of their processes.

AP is actively engaged in all program-level issues throughout the Joint Exercise Life Cycle to include: building MSELs, conducting studies, authoring story-lines and injects to support compartmented capability exercise scenarios, providing program-level capability exercise control for AF/Joint exercises and experimentation, role playing key offices/commands for training audiences, producing OPLAN/CONPLAN Annex S and required IJSTO messages and orders.

# 505th Training Squadron

Hurlburt Field, Florida



The 505th Training Squadron (505 TRS) at Hurlburt Field, FL, is part of the 505th Training Group. It is the Air and Space Operations Center (AOC) Formal Training Unit for the Air Force as well as joint and coalition partners. The unit teaches 13 initial qualification courses for the AOC weapon system, awarding more than 1,300 graduates a Basic Qualification status. In addition, the squadron teaches the Joint certified Joint Air Operations Command and Control Course (JAOC2C) to approximately 300 students per year ensuring complete transparency in the theater air planning process.

## **Mission**

The mission of the 505 TRS is to train a professional force of C2 warfighters capable of manning crew positions in a C-NAF AOC; provide joint and multi-national warfighters with world-class education and training on C2 organizations along with the processes and systems used to employ air and space forces at the operational level of war.

## **Capabilities/Key Programs**

### *AOC Training*

Thirteen Operator and Technician Initial Qualification Training (IQT) Courses spanning all five divisions of the AOC.

### *AOC Operator Training*

- AOC IQT Air Mobility Division Operators Course; Length: 19 days; CCAF: 11 semester hrs; PDS Code: UIR
- AOC Airspace IQT Course; Length: 19 days; CCAF: 9 semester hrs; PDS Code: UIT
- AOC Combat Operations Division IQT Course; Length: 19 days; PDS Code: UIM



- AOC Communications IQT Course; Length: 19 days; PDS Code: UIQ
- AOC Combat Plans Division IQT Course; Length: 19 days; CCAF: 6 semester hrs; PDS Code: UIN
- AOC Interface Control Operator IQT Course; Length: 24 days; CCAF: 7 semester hrs; PDS Code: UIS
- AOC Intelligence, Surveillance, and Reconnaissance Operator IQT Course; Length: 19 days; PDS Code: UIO
- AOC Personnel Recovery Coordination Cell IQT Course; Length: 14 days; CCAF: 4 Semester hrs; PDS Code: UNI
- AOC Strategy IQT Course; Length: 15 days; PDS Code: UIW

### *AOC Technician Training*

Trains personnel to perform combat plans, combat operations, and ISR technician duties in a JAOC.

- AOC Intelligence, Surveillance, and Reconnaissance Technician IQT Course; Length: 16 Days; CCAF: 5 Semester hrs; PDS Code: UIZ
- AOC Center Combat Plans/Operations Technician IQT Course; Length: 16 days; CCAF: 4 Semester hrs; PDS Code: UIY

### *AOC Administrator Training*

Focuses on those individuals assigned network administrator duties and systems administrator duties in an AOC or in a Joint subordinate unit.

- AOC Network Administration IQT Course; Length: 19 Days; CCAF: 3 Semester hrs; PDS Code: UIK
- AOC Systems Administrator IQT Course; Length: 19 Days; CCAF: 6 Semester hrs; PDS Code: UIJ

### *Joint Air Operations C2 Course (JAOC2C)*

C2 Training for Joint O-5 and below personnel including AOC liaison officers who require introductory training in air tasking order production, dissemination, and monitoring. Length: 13 Days; PDS Code: 77L



# 705th Training Squadron

Hurlburt Field, Florida



The 705th Training Squadron (705 TRS) at Hurlburt Field, FL, is part of the 505th Training Group. The unit serves as the focal point for advanced AOC training and C2 process improvement. The squadron exists to educate and train AOC senior leaders and staffs of Combatant and Numbered Air Force Commanders, Joint, and Allied partners. We improve and standardize C2 processes through development of operational-level techniques and procedures for the joint and coalition warfighter.

## **Mission**

The mission of the 705 TRS is to provide advanced education and training for Joint and Allied senior leaders in the AOC weapon system and facilitate C2 process improvements.

## **Capabilities/Key Programs**

### *In-Residence Senior Leadership Courses*

Courses provide in-depth AOC and process training used in the C2 of air and space combat resources at the operational-level of warfare. Additionally, this course trains senior officers from the DoD and selected coalition and allied nations to perform their designated and/or anticipated leadership duties within the AOC. The Combined and Joint Air Operations Senior Staff Courses (CSSC and JSSC) are senior professional military training programs designed to provide an overview of the planning, coordination, integration, and execution of air operations strategy in combined/joint operations. The program is designed to prepare O-6's and key O-5's for senior leadership responsibilities in a Combined/Joint Air Operations Center (C/JAOC).

*Specialized Joint Air and Space Operations Training (SJAT) Squadron Senior Academics and Leadership Training (SALT) Team instructors and Subject Matter Experts (SMEs) provide individualized, tailored, just-in-time academics, and training to USAF general officers enroute to AOC-related command assignments (e.g., NAF commander and COMAFFOR).*

### *AFFOR Intermediate Staff Course (AISC)*

The five-day AISC trains C-NAF Air Force Forces staff personnel who conduct and support operational-level planning and execution. The course develops the foundational skills necessary to execute warfighting headquarters staff responsibilities on behalf of the COMAFFOR as part of the C-NAF in support of Joint Force Commander Objectives. The target audience are O-5s and below, and select civilian or contractor personnel enroute to positions in, or directly associated with, a C-NAF AFFOR Staff.

### *Exercise Support*

Functional experts attend exercises, experiments, and contingencies to provide academic and process training and assistance.

### *Operational Warfighter/Coal Warfighter (OW/CW)*

A CSAF-directed program providing operational Tactics Techniques and Procedures (TTP) to COMAFFORs and their staffs at the operational-level of warfare. The 705 TRS, in concert with HAF/A5, hosts OW/CW conferences every fall

to discuss process improvement, update warfighters on the OW/CW application into real-world operations, and review the CSAF's OW/CW Roadmap.

### *C-NAF Lessons Learned Program*

The 705 TRS collects, processes, and publishes validated operational lessons learned and training trends in coordination with C-NAF and MAJCOM A9Ls.

### *AOC Tactics, Techniques, and Procedures*

As the 505 CCW designated Model Manager for AFTTP 3-3. AOC, the 705 TRS integrates OCTP and lessons learned collection and field inputs to process, develop, and publish AOC TTP. When published, the squadron coordinates with curriculum POCs to integrate TTP into the appropriate AOC academic courseware.

### *Integrated Air and Missile Defense (IAMD) Training*

This 705 TRS/Missile Defense Agency (MDA) joint venture provides IAMD training to 505 CCW instructors/SMEs and global AOC warfighters. Instruction includes IAMD principles and concepts, capabilities, limitations, planning TTP, and execution process knowledge to ultimately be integrated with current 505 CCW training courses and application in the operational AOC environment.

### *Support to Air University (AU)*

Support AU's School for Advanced Air and Space Studies AOC Senior Staff Course (SASSC) and Combined/Joint Force Air Component Commander (C/JFACC) Course. Provide course materials, instructors, and SMEs to teach how the Air and Space Operations Center (AOC) employs air, space, and cyber power at the operational level of war.

### *Mobile Training Teams (MTT)*

505 CCW deploys MTTs utilizing SMEs leveraged from across the C2 Training Campus Enterprise to address C-NAF training deficiencies. These MTTs provide on-site training venues to include AOC/AFFOR processes and TTPs, Crisis Action Planning, AOC Systems, and Advanced Programs IJSTO training.

### *Command & Control Warrior Advanced Course (C2WAC)*

C2WAC will provide mid-level C-NAF and C/JAOC officers the advanced knowledge, skills, and abilities to provide cross-domain integration of kinetic and non-kinetic air, space, and cyber capabilities that span AOC and AFFOR processes and procedures throughout the guidance, planning, execution, and assessment stages of the operational level of war. We anticipate five courses offered each year. Each course will be approximately five weeks long, and accommodate approximately 24 students. This course will be taught at the TS/SCI level.

# 505th Combat Training Squadron

Hurlburt Field, Florida

The 505th Combat Training Squadron (505 CTS), is part of the 505th Training Group, located at Hurlburt Field, FL. The squadron was founded March 12, 2004, as the 505th Exercise Squadron and renamed in 2006 to the 505th Combat Training Squadron. The 505 CTS is the Air Force's premier provider of command and control training for the operational level of warfare. The 505 CTS is the Distributed Mission Operations home to the USAF Professional Control Force and the Blue Flag Exercise Program. The squadron provides synthetic battlespace utilizing models and simulation tools and the USAF's only Professional Control Force in a live, virtual, and constructive (LVC) environment to train C-NAFs (COMAFFOR, AFFOR staff, C/JFACC and AOC teams) in operational-level joint and combined exercises. The squadron provides cross-MAJCOM high-fidelity synthetic operating battle-space simulations and world-class exercise control to joint and coalition warfighter activities at the strategic and operational levels of war, as well as battlespace environments for testing and experimentation.

## **Mission**

The mission of the 505 CTS is to provide C2 training for C-NAF (COMAFFOR, AFFOR staff, C/JFACC and AOC) at the operational level of war utilizing the USAF's professional control force and constructive models and simulation (M&S); to generate synthetic battlespace for exercise testing and experimentation through the Joint Expeditionary Force Experiment (JEFX) and others as directed; to provide AOC Response Cells that ensure realistic training for other Service or joint force component training; and to create and maintain the C2 Weapon System Part Task Trainer (C2WSPTT) to provide continuation training opportunities for AOCs worldwide.



## **Capabilities/Key Programs**

### **BLUE FLAG**

The BLUE FLAG exercise program has been in existence since 1976. The goal of the program is to train combat leaders and supporting battlestaff personnel in command, control, and intelligence procedures for specific theaters of operation. Each BLUE FLAG exercise begins with three days of academic/seminar training, focusing on the skills needed to man a fully functioning Air and Space Operations Center. This is followed by a four-day, computer-assisted exercise using actual friendly and enemy orders of battle, contingency and war plans, and theater procedures in a simulated military operation. Participants are given maximum flexibility in managing the employment of friendly forces, thus allowing player actions to influence the battle outcome.

BLUE FLAG exercises provide a building block approach to prepare Joint and Combined Air Component Commanders and personnel to support contingency operations worldwide. Senior officers hone their skills in directing large air forces. New weapons and equipment for air warfare are tested and improved under simulated war conditions. The whole process of directing a modern war is taught as it continues to be refined.





## Joint Expeditionary Force eXperiment (JEFX)

The 505 CCW, is the execution lead for applicable JEFX events. JEFX is a series of CSAF-sponsored experiments designed to explore leading edge C2 tools and processes referred to as “initiatives” for potential rapid fielding to warfighters. Using live, virtual, and constructive (LVC) assets as required, JEFX creates an environment to successfully stimulate and assess the initiatives for their operational utility. The initiative “assessors” for JEFX events are typically the Player participants. The Air Force Command and Control Integration Center which recently moved under ACC/A8 at Langley AFB, VA establishes the JEFX “theme” for each fiscal year, sets experiment event dates, determines the initiatives, allocates JEFX funding, leads the assessment/report-writing process, as well as the effort to transition initiatives to the warfighter.

## MODEL AND SIM CAPABILITIES SUMMARY

### *Air Warfare Simulation (AWSIM)*

AWSIM is a near real-time interactive simulation of the air and air defense warfare environment. AWSIM allows players from opposing sides to view the geographic movement of friendly and enemy air assets while also providing tabular information through video displays and selected hard copy products. AWSIM interfaces with other constructive, virtual, and live simulations in either a High Level Architecture (HLA) or Distributed Interactive Simulation (DIS) environment and allows users to define, structure, and control friendly (Blue) and enemy (Red) assets. AWSIM is currently part of both the JLVC (JWFC) and JLCCTC (BCTP) Federations.

### *Combat Systems Interface (CSI)*

Formerly known as AWSIM to TBMCS Interface (ATI), CSI is designed to automate the input of AWSIM orders based on ATO missions. It pulls the ATO, parses, and converts missions to AWSIM orders. CSI also allows user interaction and changes before the missions are placed into AWSIM. It updates TBMCS with information such as take off times, land times, and mission status.



### *Distributed Interactive Simulation (DIS)*

DIS is an interface contained within the AWSIM code. It links AWSIM directly with virtual simulators via the Distributed Interactive Simulation (DIS) protocol. It can interact with Cockpit Simulators (e.g., JSF, F-15C, A-10, F-16C, MC-130H), Combat Team Simulators (e.g., AWACS, MCE, ABL, Patriot), and ISR Simulations (e.g., JSTARS, UAV, Rivet Joint, U2, Cobra Ball, Cobra Judy, CATT/DICE, MDST, UMS).

### *AF Synthetic Environment for Reconnaissance and Surveillance (AFSERS)*

Provides airborne ISR streaming video and still picture intelligence feeds for constructive Predator and Global Hawk RPAs, U2s, and TENCAP. It also has the capability of modeling aircraft carrying/deploying hell fire missiles.

### *Logistics Simulation (LOGSIM)*

LOGSIM logistically constrains Air Operations without impeding training objectives. It also provides visibility into aircraft maintenance at base (Wing) level, to include aircraft problems with repair delays, flight line equipment impacts, spare parts usage, as well as tracking fuel, and munitions consumption.

### *Air, Space, and Cyber Constructive Environment - Information Operations System (ASCCE-IOS)*

ASCCE-IOS is a suite of multiple simulations, used as part of numerous training federations. These include federations using the High Level Architecture (HLA)/Run-Time Infrastructure (RTI) such as the Joint Training Transformation Initiative plus Korean Simulations (JTTI+K), the Joint Land Component Combat Training Capability (JLCCTC), the Joint Theater Level Simulation (JTLS) based Joint Multi-Resolution Modeling (JMRM) Federation, and the Joint Live, Virtual, Constructive (JLVC) Federation.

# 505th Communications Squadron

Hurlburt Field, Florida



The 505th Communications Squadron (505 CS) is part of the 505th Training Group, at Hurlburt Field, FL. The 505 CS is the premier provider of state-of-the-art C2 systems in support of activities serving the evolving needs of the C2 warfighter. The 505 CS role is to support the 505 CCW's mission to improve warfighter capability through C2 testing, tactics development, and training.

## **Mission**

The mission of the 505 CS is to effectively operate and maintain C2 systems supporting testing, training, exercise, and experimentation. The 505 CS supports approximately 100 C2 exercises, experiments and testing, and training events annually. Regular exercise support goes to Army Mission Rehearsals, UNIFIED ENDEAVOR, Air Force BLUE FLAGS, and various other events such as PACOM's TERMINAL FURY. Other types of events supported are JOINT EXPEDITIONARY FORCE EXPERIMENT, Senior Leader C2 courses, such as the Coalition Joint Air and Space Senior Staff Course, Army Joint Support Team events, and the 505 TRS's 13 AOC IQT courses.

## **Capabilities/Key Programs**

To execute this mission the unit is organized into a command section and two flights--an Operations Flight (SCO) and a Plans and Programs Flight (SCX). Through these flights, the following various services are provided: Knowledge Operations Management (KOM), Information Technology Asset (ITA) management and network, help desk, systems administration, secure voice, VOIP, cryptographic maintenance and administration, video conferencing (VC), exercise planning, Information Assurance, communications requirements, and technical solutions for exercises and events. The 505 CCW is distributed to 13 locations CONUS wide and the 505 CS remains flexible to support locally and in a distributed manner.

## **Network Capabilities**

These networks are used primarily to support C2 exercises/tests/experiments.

- Multiple iterations of UNCLASS, REL SECRET, US SECRET, TOP SECRET networks
- Multiple external network connections
  - SIPRNET, JWICS, JTEN, DREN, S-DREN, JIOR, BLCSE
- WAN connecting Hurlburt, Nellis, and Kirtland
- Boundary Security System
- Video Conferencing providing HD audio/video and bridging capabilities

## **System Capabilities**

These systems are used primarily to support C2 exercises/tests/experiments.

- FTU--while the FTU falls under the 505 TRS, we provide the sustainment of the AOC baseline systems.
  - Engineering and Configuration Management support for training, game, and development of AOC suites
- AOC Simulator
  - Two AOC Server Baseline Configurations
  - Two AOC Reduced Server Configurations (AOC Lite Suites)
  - Dynamic configuration, eg: US Only, NATO Releasable, GCC, REL-ROK, Unclassified
  - Live and Simulated Data Link Feed Available
- M&S Capabilities
  - Engineering support for four M&S suites
  - Developed integrated "Super Client" for controllers
  - Multiple configurations of UNCLASS, REL SECRET, US SECRET, TOP SECRET, and Cross Domain solutions



# 505th Test and Evaluation Group

Nellis AFB, Nevada



## Mission

The 505th Test and Evaluation Group (505 TEG) is an Operational Test Organization focused on Theater Air Control System and ISR weapons systems; Conduct Test, Training, Evaluation and Tactics Development to advance the integration of Air, Space, and Cyber capabilities into the C2 construct. Monitor, evaluate, and optimize Air Defense RADAR networks. Enhance Data Sharing for C2 and ISR Systems.

## 505th Test and Evaluation Group

Technical Advisor

505th Test Squadron

705th Combat Training Squadron

605th Test and Evaluation Squadron

Detachment 1, 605 TES

Detachment 2, 605 TES

84th Radar Evaluation Squadron



## Key Programs

Persistent infrastructure to address integration seams for Joint operations crossing Air, Space, and Cyber

Focal point for C2 and ISR TD&E, Advanced Training and TTP

Joint datalink architecture design and test

Nontraditional/ISR capabilities

STO to collateral capability awareness, test, and training

Advanced training environment for emerging capabilities

Leverage existing LVC events for persistent TTP development

# 505th Test Squadron

Nellis AFB, Nevada



The 505th Test Squadron (505 TS) at Nellis AFB, NV is the recently reorganized 505th Operations Squadron with additional mission responsibilities incorporated to accomplish integration testing. The new 505 TS retained its previous mission responsibilities to provide Combined Air Operations Center advanced training during Joint, Coalition and service focused events, develop tactics, techniques and procedures to assess and integrate space, cyber, IO, and irregular warfare C2 operations in a Joint environment while adding capabilities for integration testing across air, space, and cyber domains. The 505 TS accomplishes its mission in a robust operational environment employing Combined Air Operations Center-Nellis (CAOC-N) and its connectivity to the Nevada Test and Training Range. Additionally, the squadron provides support to major exercises such as RED FLAG, GREEN FLAG, Weapons School Mission Employment, and the US Army Combat Training Centers. CAOC-N continues to expand capabilities and provides a one-of-a kind array of C2 test and evaluation, training, and tactics development abilities. The 505 TS also supports the planning and execution of C2 processes and systems during multiple Joint, Coalition, and service-focused exercises, operational rehearsals, and experiments using live, virtual, and constructive (LVC) air, space, and cyber capabilities.

## **Mission**

The mission of the 505 TS is to integrate Air, Space, and Cyber capabilities throughout the Theater Air Control System by conducting operational test and evaluation, developing advanced TTP, and provides support to data exchange and C2 architectures to ensure all source information is available to the warfighter. Additionally, the TS operates and maintains CAOC-N to host advanced AOC training and produce fully trained joint and multi-national C2 Warfighters at the operational level of war.

## **Capabilities/Key Programs**

- Provide continuation training and opportunities for mission qualification training focused on CAOC Combat Operations Division and Intelligence, Surveillance, and Reconnaissance Division crews, technicians, and liaison officers.
- Provide an advanced training environment for emerging capabilities that leverages existing LVC events to provide persistent TTP development.
- Facilitate the execution of RED FLAG by providing C2 at the operational level of war. Provide the opportunity to train and exercise systems integration and crew interface between the tactical and operational levels of war.

- Support the United States Air Force Weapons School by providing systems, processes, and people that contribute to the Integration Phase and Mission Employment Phase of the Weapons School curriculum.
- Conduct operational test and evaluation of Theater Air Control Systems and selected ISR weapons systems. This includes a persistent infrastructure to address integration seams for joint operations crossing, air, space, and cyber domains.

## **Joint Integration Team (JIT)**

Provides training integration of Air Component capabilities for the Army Combat Training Centers (CTC) and Marine Corp Tactics and Operations Group (MCTOG). Integration activities include Joint ISR/EW/IO/Space training, classroom, over-the-shoulder training, and Division White Force support. The JIT also provides tactics development and test and assessment to integrate current and emerging TTP lessons learned into CTC and MCTOG events. JIT Systems Integration includes existing and emerging systems training (TBMCS, CPOF) as well as live, virtual, and constructive support (Modeling and Simulation).

## **Joint Digital Integration for Combat Engagement (JDICE)**

Develop, test, and validate data exchange architectures and TTP; apply tactical integration solutions to enhance AF Combat Identification (CID); develop joint testing and training capabilities in support of AF datalink operations; transition solutions and recommendations for joint CID and joint data network acquisitions, plans, and operations to Services and Combatant Commands. The 505 TS will use advanced programs in the Advanced Capabilities Environment (ACE) construct within the USAFWC to support COMACC's vision for multi-source battlespace awareness.

- Partner with DMOC, DMOC-S, DTOC, AFAMS, and others to increase realism of testing with live, virtual, and constructive assets
- Integrate western range complexes for venues, networks, and architectures for test and training
- Facilitate concurrent interoperability testing to support system certification requirements for other test agencies
- Expedite use of certified and accredited test tools to facilitate TD&E process



# 705th Combat Training Squadron

Kirtland AFB, New Mexico



The 705th Combat Training Squadron (705 CTS) at Kirtland AFB, NM, reports to the 505th Test and Evaluation Group at Nellis AFB, NV. The squadron began in the early 1980s as an Office of the Secretary of Defense effort to address air defense issues in Central Europe. The 1990s focused on Joint Theater Missile Defense leading up to today's establishment of full spectrum Distributed Mission Operations capability. It was renamed the 705th Combat Training Squadron in 2006. The 705 CTS exists to provide the world's finest virtual Combat Air Force and C2 and ISR facility as well as function as the lead DMO integrator for theater-level, full spectrum combat training and testing for the U.S. Air Force, joint, and coalition partners.

## Mission

The mission of the 705 CTS is to develop, integrate, and deliver a virtual Air, Space, and Cyber warfare environment for Air Force, joint, and coalition combat training, test and experimentation. The 705 CTS performs its mission by executing Numbered Air Force-scale events focused on exercising the Theater Air Control System while integrating theater Area of Responsibility Operation Plans; supporting multiple applications, such as Air Expeditionary Forces spin-up, preparation for major combat operations, data interchange, test and evaluation, tactics, techniques and procedures validation, live, virtual and constructive range integration, experimentation and decision support analysis, and establishing the Distributed Warfare Center (DWC) as ACC's operationally-focused scenario development and database repository for future unit-driven off-the-shelf applications. The DWC's roles include leading technical integration efforts, network management, scheduling, and execution of theater-level DMO events and developing daily/weekly DMO training exercises for ACC.

## Capabilities/Key Programs

### VIRTUAL FLAG (VF)

VF is a real-time tactical-to-operational level event using air, land, space, cyber, and maritime distributed scenarios to integrate LVC simulations and train warfighters in robust combat scenarios. Joint and Coalition combat platforms are integrated from DMOC-based and worldwide-distributed operational sites.

- VF, initiated by Commander, Air Combat Command EXPLAN 88, is a quarterly joint DMO exercise integrating more than 600 Joint warfighters.
- The 705 CTS battlespace is home to Air Force/Joint C2 and ISR and weapons systems simulators including AWACS, JSTARS, CRC, Cobra Ball, Predator/Global Hawk/U2 ISR platforms, PATRIOT, IFACT, Airborne Laser, F-15C/E, space simulators, EADSIM, EADTB, Army Cell (JCATS, ACE-IOS, FireSim, AFATDS, JSWS), F-16C Block 30 Unit Training Devices, Adversary/Aggressor FSU MiG-23/Mig-29/Su-27 training systems, NGTS, DICE/DIADS, STAGE, and a 40+ position white force cell (Joint Exercise Control Group).
- The 705 CTS is leading the charge to integrate partner coalition warfighters into the DMO arena. Coalition VIRTUAL FLAG 09-4 executed in September 2009 was the first-ever "4-eyes" VF, with participants from Canada, Great Britain, and Australia joining U.S. forces.

### Warfighter Focused Events (WFE)

WFEs are small-scale, integrated team training events designed to satisfy specific warfighter requirements ranging from individual to C-NAF identified challenges and problem sets.

- Scalable and tailorable scenarios including certain high side operation vignettes.
- Developed scenarios become on-the-shelf "plug and play" events for large, composite force exercises like VIRTUAL FLAG.
- WFEs not specifically limited to training can accommodate testing, experimentation, and TTP development requirements.



# 605th Test and Evaluation Squadron

Hurlburt Field, Florida



The 605th Test and Evaluation Squadron (605 TES) at Hurlburt Field, FL, is a part of the 505th Test and Evaluation Group at Nellis Air Force Base, NV. The squadron began as the 605 TES at Eglin Air Force Base in 1993 and moved to Hurlburt Field in 1997 where it was renamed and structured under the 505 CCW in 2004. The 605 TES is the Command and Control and Intelligence, Surveillance and Reconnaissance test manager for the 505 CCW. The 605 TES is responsible for conducting operational testing, tactics development and evaluation, C2 and ISR collection, processing and exploitation systems as well as managing and providing resources to support operational testing, development testing, and various MAJCOM and joint special projects. The unit also supports C2 weapons system development and modernization.

## **Mission**

The mission of the 605 TES is to conduct operational tests of AWACS, JSTARS, AOC, TACP, CRC, Air Defense Sectors, DCGS, and other system upgrades as directed in a realistic environment prior to use by warfighters. The 605 TES also develops and evaluates tactics to optimize the combat effectiveness of these weapon systems and conducts field visits to educate operational units on test results.

## **Capabilities/Key Programs**

### ***Air Operations Center (AOC) Flight***

The AOC Flight (DOA) conducts operational testing on key joint-, combined-, and unit-level Theater Air Control Systems (TACS) that exercise command and control of theater-wide aerospace forces in support of the Joint Force Commander's campaign plan and enable the Joint/Combined Forces Air Component Commander to accomplish the mission. Operating Location-B reports to the DOA Flight and is located at the Ryan Center at Langley AFB, VA.

### ***Control and Reporting Center (CRC) Flight***

The CRC Flight (DOC) conducts OT, user acceptance testing (UAT) and other testing for theater air control systems as required for the joint warfighter. DOCs focus is on the CRC and other tactical elements of the theater air-ground system (TAGS) and their interface with other systems. OL-C reports to DOC flight and is co-located with the 133rd Test Squadron at Fort Dodge, IA.

### ***Intelligence, Surveillance & Reconnaissance (ISR) Flight***

The ISR Systems Flight (DOI) conducts operational tests and evaluations of systems used to integrate C2 and ISR based capabilities into the Distributed Common Ground System (DCGS), Cryptographic Modernization (CM) Systems and Counter Improvised Explosive Devices (C-IED) Systems. DOI also provides tactics development and evaluation expertise.

### ***Tactical Air Control Party (TAC-P) Flight***

The TAC-P Flight (DOT) conducts OT and TD&E for TAC-P systems required for Joint Coalition warfighters. These include TAC-P command and control systems, datalink systems, and training systems aimed at improving speed, range, accuracy, and expertise in requesting, approving, and directing close air support (CAS).

### ***Analysis Flight***

The Analysis Flight (DTA) provides test and analysis expertise and support as well as tech support for all tests in the other flights. The flight also provides data collection support and analysis for the squadron as well as web site design and maintenance.

### ***Test Management Flight***

The Test Management Flight (DTM) enhances the Air Forces theater air and missile defense capabilities through the integration of existing and emerging technologies, evaluates fieldable prototype systems, ensures compatibility with other systems/services, and ensures DoD combat capability. OL-A reports to DTM flight and is located in CAOC-N at Nellis AFB, NV.



## *Detachment 1, 605 TES*

*Seattle, Washington*

Detachment 1, 605 TES provides operational testing for the E-3 AWACS aircraft. Test programs include radar subsystem, electronic support measures subsystem, IFF, navigation, and computers (data processing). Consoles display computer-processed data in graphic and tabular format on video screens, communications: UHF/VHF/HF/SATCOM radios, Link-16, Link-11, console operators perform surveillance, identification, weapons control, battle management, and communications functions.



## *Detachment 2, 605 TES*

*Melbourne, Florida*

Detachment 2, 605 TES provides operational testing on the E-8C Joint STARS aircraft to ensure it provides Joint Air Force/Army Battle Management, Surveillance, and Targeting systems designed to provide air and land component CCs with: near-real time, wide-area surveillance and targeting information on moving and stationary terrestrial and maritime targets, enhanced theater battlespace management in support of operations directed at delaying, disrupting, or destroying enemy forces.



# 84th Radar Evaluation Squadron

Hill AFB, Utah

The 84th Radar Evaluation Squadron (84 RADES) at Hill AFB, UT, reports directly to the 505th Test and Evaluation Group at Nellis AFB, NV. Tracing its lineage to the 7th Radar Calibration Flight formed in 1948 at Hamilton AFB, CA, the unit was redesignated as the 84 RADES in 1987. In October 2005, the unit joined the 505 CCW. The 84 RADES evaluates, optimizes, and integrates fixed and mobile sensors for both the operational and federal communities. Additionally, the 84 RADES sets the standard for coverage prediction and depiction, as well as provides data analysis and unique radar forensics supporting search and rescue and aircraft mishap investigations. Squadron members ensure that controllers have reliable and accurate sensor information for day-to-day operations, contingencies, and specialized activities such as counter-narcotics and search and rescue. Armed with technical experts, actual controllers, communicators, radar maintainers, specially trained surveyors, and with operating locations at three NORAD Air Defense Sectors, the 84 RADES is a major contributor to all facets of air detection, air sovereignty, and command and control. In addition, the 84 RADES conducts radar evaluations, obstruction analysis, to include wind farm evaluations, radar coverage studies, and diagrams in support of the Federal Aviation Administration and the Department of Homeland Security.

## **Mission**

The mission of the 84 RADES is to provide the Warfighter responsive worldwide radar-centric planning, optimization, and constant evaluation to create the most sensitive integrated radar picture. Our mission statement defines what the 84 RADES does and why we exist. From that, we have adopted six specified mission tasks to focus the direction of our unit and the future of radar-centric defense capabilities.



## **Capabilities/Key Programs**

### *Performance Monitoring*

Execute near real-time performance monitoring of 218+ radar systems in the NORTHCOM, ALCOM, PACOM, and CENTCOM areas of responsibility, to ensure optimum operation.

### *Radar Survey and Placement*

Provide war planners with placement analysis to architect and maximize the theater radar picture, as well as meet the warfighter's need to recognize limitations and vulnerabilities.

### *Sensor Evaluation/Optimization*

Conduct required baseline and special evaluations for 242+ sensors, to optimize system performance, determine operational capabilities and limitations, and assess impacts of external factors and/or upgrades, supporting non-cooperative target detection, air sovereignty, and C2.

### *C2 System Test and Validation*

Evaluate multi-sensor connectivity and integration into DoD C2 systems to ensure accurate processing of radar inputs, assess latency, and also provide exercise support.

### *Event Analysis*

Conduct post-event sensor data recovery and investigation for aerial mishaps; provide assistance to the Air Force Rescue Coordination Center, the U.S. Air Force and U.S. Navy Safety Centers, and the National Transportation Safety Board.

### *Software Engineering*

Provide and sustain the unique tools that support the other five mission tasks.



# Detachment 1, 505 CCW

Fort Leavenworth, Kansas



Detachment 1, 505 CCW is located at Fort Leavenworth, KS and serves as the principle air, space, and cyberspace power advisor to the Army Training and Doctrine Command Combined Arms Center (CAC) and the US Army Reserve's 75th Battle Command Training Division (75 BCTD) headquartered in Houston, TX. A geographically separated unit, Det 1 fills a key role in the 505 CCW mission of developing America's command and control dominance as the unit focus is integrating air ground systems/capabilities/organizations for joint combat readiness training.

## **Mission**

Provide liaison and exercise support to the Combined Arms Center on air, space, and cyberspace power employment with direct support to the Battle Command Training Program (BCTP) and 75 BCTD.

## **Functions**

Det 1 provides air, space, and cyberspace power expertise and field experience across a broad spectrum of operations. Personnel advise the command on present and future weapons systems, ordnance, tactics, procedures, capabilities, and limitations as they affect Army force structure, concepts, doctrine, training, modeling, simulation, acquisition and analysis programs, and support the Deputy Commanding General for Training; the Director, Battle Command Training Program; Director, Battle Command Battle Laboratory; and also coordinates with HAF, USAF-WC and other AF agencies on matters of interest to the CAC and on exercise integration for joint warfighter training in all theaters of operations.



## **Capabilities/Key Programs:**

### *Exercise Development and Execution*

"Build the sandbox" for combat readiness training that provides doctrinally correct and theater specific air ground integration capabilities for both Army and Air Force training audiences. Exercise planning functions include: coordinating unit training objectives, player cells and manning requirements; aligning TBMCS capabilities and systems integration; building story lines and Master Scenario Event Lists; providing liaison for HAF, ACC, USAFWC, and Highly Qualified Expert participants.

### *Training Support*

Personnel provide subject matter expertise to each of four BCTP operations groups and the 75 BCTD as part of a lengthy exercise planning cycle, then serve as Deputy Exercise Director for Air and Space, Exercise Controllers and Observer Trainers for all combat training exercises and seminars. Det 1 is required to coordinate for the right number and mix of exercise support capabilities to ensure correct air, space, and cyberspace power is applied in the sandbox during every training event.

### *BCTP*

Build, then execute, BCTP and BCTD Mission Rehearsal Exercises (MRX), Mission Readiness Exercises (MREx), Full Spectrum Exercises (FSX), Warfighter Exercises (WFX), and Aviation Training Exercises (ATX) for Army warriors (Corps through Brigade) and their habitually aligned Air Force ASOG, ASOS, and TACP. Training impacts every combat unit in the US Army.

### *Air Liaison*

Advise senior Army and AF leaders on all aspects of air component integration into a Joint Task Force; provide explanation on Joint doctrine, tactics and procedures, and the Joint Force Air Component Commander organization; integrate air ground capabilities, targeting, airspace control, and theater air defense. Provide briefings, facilitate discussions, and augment staffs. Develop and present performance feedback to commanders and staffs and build final exercise AAR.

# Army Joint Support Team

Hurlburt Field, Florida



The Army Joint Support Team (AJST) at Hurlburt Field, FL and at Nellis AFB, NV is a directorate within the US Army Combined Arms Center for Training, Fort Leavenworth, KS. AJST is the Army's lead organization for education and training of joint air-ground operations and has been a collaborative partner with the USAF at Hurlburt Field since 1962. AJST operations at Nellis AFB began in 1997 when the Air Ground Operations School moved from Hurlburt Field.

## **Mission**

AJST conducts US Army and joint air-ground operations education, training, and C2 systems integration for the four services and joint organizations to provide relevant and ready forces to Joint Force Commanders.

## **Capabilities/Key Tasks**

### *AJST Directorate*

AJST prepares and conducts resident and nonresident instruction on joint air-ground operations in support of Army, multiservice, joint force, and special operations requirements. In collaboration with the Air Force, AJST conducts Army and joint education and training in multiservice and joint courses of instruction at the 505 CCW and at the 57th Operations Group at Nellis AFB. Within resources, AJST provides ground maneuver expertise and instruction in support of Air Force Title 10 courses at both locations.



## *Mission Command Training Program (MCTP)*

AJST supports MCTP with education, training, C2 systems integration, replication of joint air-ground operations C2 processes and systems, and exercise planning support for MCTP events for Army corps and division headquarters, including pre-deployment mission readiness exercises and full-spectrum exercises. AJST supports these events in coordination with Det 1, 505 CCW and the 505 CTS.

## *Battlefield Coordination Detachment (BCD) Support*

AJST supports Battlefield Coordination Detachments with resident and nonresident education and training. This includes providing specialized training, training support, and exercise technical support to BCDs at their theater locations.

## *Joint Air-Ground Command and Control Lab*

In partnership with 505 CCW, AJST operates a unique standalone training center focused on joint air-ground operations C2. This facility supports joint and multiservice training at all echelons of command and integrates ground maneuver C2 with airpower C2 capabilities of all services. The facility supports education, training, experiments, and limited operational tests with a suite of Army C2 systems operating in a joint environment.



# 505 CCW Reserve Programs



## **General Information and Overview**

Two Reserve programs at the 505 CCW leverage the skills and knowledge of reserve members to provide essential support and continuity to Wing mission requirements.

The primary reserve program at the 505 CCW is the USAFWC Total Force Integration (TFI) Associate Program. The 505 CCW's TFI unit is Detachment 1, 84th Test and Evaluation Squadron. In this program, individual Air Force Reserve members are assigned to the reserve unit and are then detailed or "associated" into regular AF units to work side-by-side with regular active duty personnel.

The Det 1, 84 TES members are Active Guard Reserves (AGR), Air Reserve Technicians (ART) and Traditional Reservists (TR). TR and AGR vacancies are advertised at: <https://www.my.af.mil/afpc2ww3/vmpf/Hub/Pages/Hub.asp>. ART positions are advertised through the USA Jobs site at <http://www.usajobs.com>. Det 1, 84 TES currently has members serving at Hurlburt Field, FL, and Nellis AFB, NV.

The 505 CCW also has a handful of Individual Mobilization Augmentee (IMA) Reservists. These IMA personnel are not assigned to the Reserve TFI unit but rather directly to the regular Air Force units in which they work. IMA positions are advertised via RMVS at <https://www.my.af.mil/afpc2ww3/vmpf/Hub/Pages/Hub.asp>. The 505 CCW currently has IMA members serving at Hurlburt Field FL, Nellis AFB NV, Houston TX, and Birmingham AL.

Other Air Force Reserve and Air National Guard members may temporarily augment the 505 CCW as required via man-day tours. The 505 CCW has established a 505 CCW/Reserve-ANG-IMA Opportunities Community of Practice (CoP) to identify temporary manpower needs at <https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=RC-OT-00-53>.

Questions about the TFI Associate unit should be directed to the Det 1, 84 TES Commander, at 850-884-9395 or DSN 579-9395.

Questions about other reserve opportunities should be directed to the 505 CCW Reserve Coordinator at 850-884-9011 or DSN 579-9011.

### Point of Contact:

505th Command and Control Wing Public Affairs  
138 Hartson Street  
Hurlburt Field FL 32544-5231  
(850) 884-6512 or DSN: 579-6512  
E-mail: [505ccw.pa@hurlburt.af.mil](mailto:505ccw.pa@hurlburt.af.mil)

# 505 CCW Locations





## Capabilities Based Phone Directory

### Advanced Programs

850-884-5115      DSN 579-5115

### AFFOR Intermediate Staff Course

850-884-4367      DSN 579-4367

### AOC Initial Qualification Training

850-884-7611      DSN 579-7611

### Army Combat Deployment Prep/MRXs and C2 Support to Combined Arms Center

913-684-4052      DSN 552-4052

### BLUE FLAG and COCOM Exercise Support

850-884-5683      DSN 579-5683

### C2 Tactics, Techniques, and Procedures Development and Lessons learned

850-884-4367      DSN 579-4367

### C2/Theater Air Control System Test and Evaluation

850-884-9102      DSN 579-9102

### Combined/Joint Air Operations Senior Staff Course (C/JSSC)

850-884-4367      DSN 579-4367

### Combined/Joint Force Air Component Commander Course (C/JFACC)

850-884-4367      DSN 579-4367

### Joint Air Operations Command and Control Course (JAOC2C)

850-884-7611      DSN 579-7611

### Joint Expeditionary Force Experiment / C2 Experimentation Support

850-884-9014      DSN 579-9014

### Long Range Radar Monitoring and Evaluation

801-777-3712      DSN 579-3712

### Nellis C2 Support to RED FLAG, GREEN FLAG, VIRTUAL FLAG, and Weapons School

702-652-0871      DSN 682-0871

### Operational Command Training Program

850-884-5944      DSN 579-5944

### SAASS AOC Senior Staff Course (SASSC)

850-884-5944      DSN 579-5944

### VIRTUAL FLAG, Warfighter Focused Events and Distributed Mission Operations Center (DMOC)

505-846-9109      DSN 246-9109

### Wing Headquarters and Staff

850-884-1800      DSN 579-1800

# Additional Resources

505 CCW Public Website - <http://www.505ccw.acc.af.mil>  
Important Phone Numbers

## Hurlburt Field, Florida - Area Code 850/DSN 579

### WING COMMAND SECTION

CC	(850) 884-1800
CV	(850) 884-1800
CCC	(850) 884-5920
CCCA	(850) 884-6271
CCS	(850) 884-1800
CCE	(850) 884-5054
CCEA	(850) 884-7857
CAG	(850) 884-9069
First Sgt	(850) 884-1805

### WING STAFF

Director of Staff	(850) 884-1801
Protocol	(850) 884-9076
Public Affairs	(850) 884-6512
Graphics	(850) 884-9029
Safety	(850) 884-9053
Safety	(850) 884-2054
Manpower	(850) 884-5478
History	(850) 884-7256

### BUDGET/FINANCE (FM) FAX 4-9082

Comptroller	(850) 884-9036
Deputy Comptroller	(850) 884-9084
FMA	(850) 884-7922
FMA	(850) 884-9083
FMA	(850) 884-9142

### TECHNICAL ADVISOR (TA)

TA	(850) 884-1816
Analyst	(850) 884-9557
TA Assist	(850) 884-9037

### JUDGE ADVOCATE (JA) FAX 4-6361

JA	(850) 884-9146
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### PLANS (XP) FAX 4-9008

Chief	(850) 884-9354
Deputy	(850) 884-9038
Wing Scheduling	(850) 884-5872
Chief Readiness	(850) 884-9359
Reservist Specialist	(850) 884-9173
Logistics Specialist	(850) 884-5810

### AFSO21 (850) 884-9264

### CONTRACTING (PK) FAX 4-9082

Program Manager	(850) 884-5444
Deputy PM	(850) 884-7416
Prgm Specialist	(850) 884-6338
Contracting Officer	(850) 884-5122
Contracting Officer	(850) 884-5608
Contracting Specialist	(850) 884-9087

### CIVIL ENGINEERING (CE) FAX 4-9008

Dir, Wg Facilities	(850) 884-9039
Civ Eng	(850) 884-9012

## Hurlburt Field, Florida - Area Code 850/DSN 579

### MISSION SUPPORT (MS) FAX 4-5348

Chief of MS	(850) 884-9011
Supt, CSS	(850) 884-9045
NCOIC, Mil Pers	(850) 884-5073
Civ Pers	(850) 884-9016
Civ Pers	(850) 884-9035
Wing Training Mgr	(850) 884-4163
Computer Support	(850) 884-6981
CSS	(850) 884-9046
Manpower	(850) 884-7071

### ADVANCED PROGRAMS (AP) FAX 4-4850

Chief	(850) 884-5693
Deputy	(850) 884-3333
Chief Security	(850) 884-3316
STO Chief	(850) 884-5115
NCOIC, AP	(850) 884-3120
Intel Analyst	(850) 884-4621
Sys Admin	(850) 884-3488
Intel AO	(850) 884-5976
STO AO	(850) 884-3119
CPSM	(850) 884-5676
ISSO	(850) 884-3128

### SECURITY FAX 4-5083

Supt, SF	(850) 884-1664
Security Manager	(850) 884-5097
Security Asst	(850) 884-6816

### COMMUNICATIONS SUPPORT

VTC Manager	(850) 884-9275
Client Support	(850) 884-9300

### JEFX

JEFX Dir	(850) 884-9014
Deputy	(850) 884-9472

### AJST DIRECTOR (850) 884-3491

Deputy	(850) 884-7498
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### RESERVE INTEGRATION FAX 4-5083

DET 1, 84 TES/CC	(850) 884-9395
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## Ft Leavenworth, Kansas - Area Code 913/DSN 552

### DETACHMENT 1, 505 CCW

Det 1, 505 CCW/CC	(913) 684-4053
Det 1, 505 CCW/CD	(913) 684-4052
Det 1, 505 CCW/CCE/ADO	(913) 684-4058
Det 1, 505 CCW/CCA	(913) 684-4051

## Nellis AFB, Nevada - Area Code 702/DSN 682

### 505th TEST AND EVALUATION GROUP (505 TEG)

505 TEG/CC	(702) 652-8583
505 TEG/CD	(702) 652-3591
505 TEG/CCE	(702) 652-4683
505 TEG/CEM	(702) 652-3713
505 TEG/CSS	(702) 652-8583
505 TEG/CSS	(702) 652-3692
505 TEG/RA	(702) 652-8913
505 TES/CC	(702) 652-8135
505 TES/DO	(702) 652-9883
505 TES/DOS	(702) 652-9810
505 TS Supt	(702) 652-3729
605 TES/CC	(850) 884-9102
605 TES/DO	(850) 884-3047
605 TES Supt	(850) 884-6873

## Seattle, Washington - Area Code 253

Det 1, 605 TES/CC	(253) 657-8442
Det 1, 605 TES/DO	(253) 657-8478
Det 1, 605 TES Supt	(253) 657-8447

## Melbourne, Florida - Area Code 321/DSN 854

Det 2, CC	(321) 726-5245 x7150
Det 2, 605 TES/DO	(321) 726-5245 x7188
Det 2, 605 TES/Supt	(321) 726-5245 x7192

## Hill AFB, Utah - Area Code 801/DSN 777

84 RADES/CC	(801) 777-3712
84 RADES/DO	(801) 586-7900
84 RADES/Supt	(801) 777-5069
84 RADES/CCS	(801) 777-3712

## Ft Dodge, Iowa - Area Code 515/DSN 279

133 TS/CC	(515) 574-3246
133 TS/Supt	(515) 574-3248

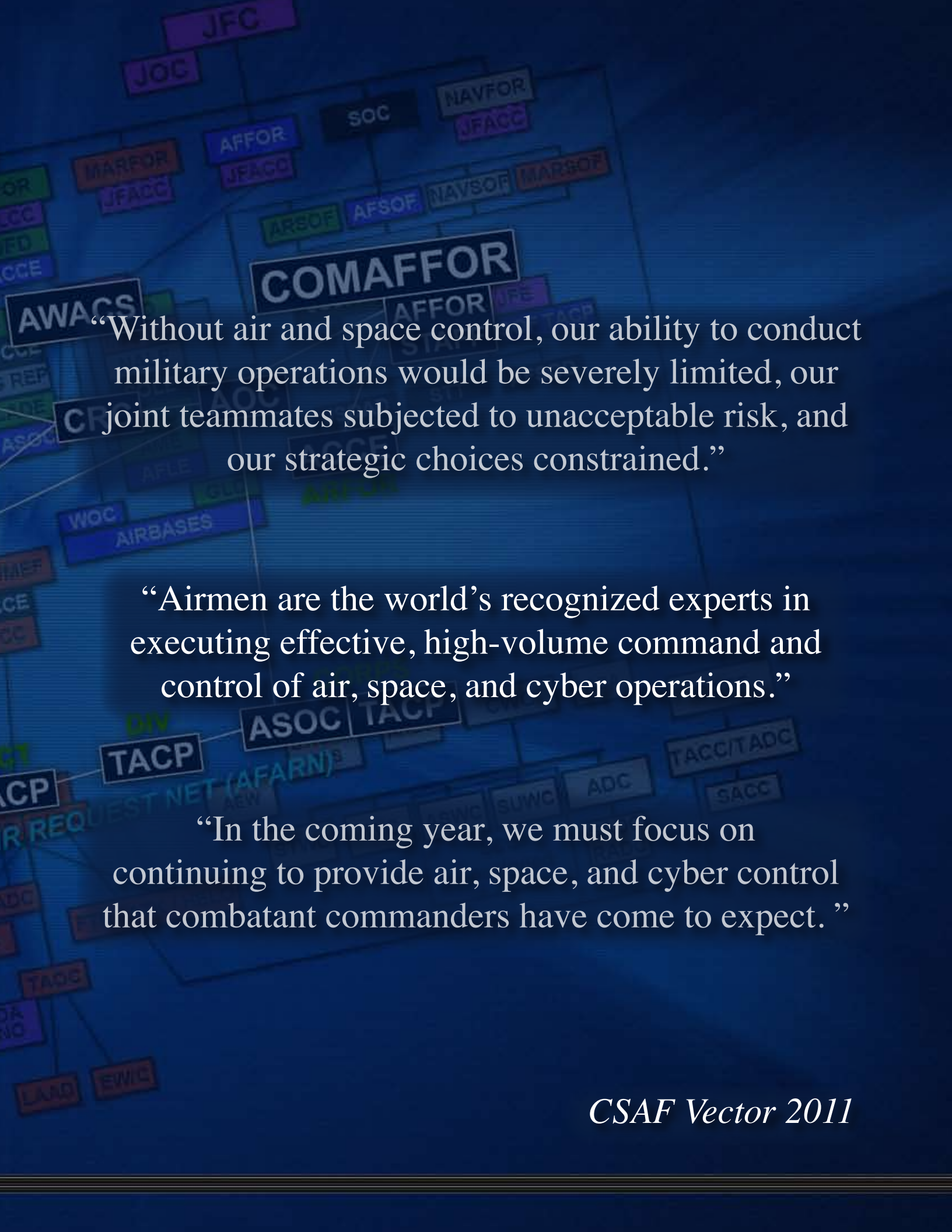
## Kirtland AFB, New Mexico - Area Code 505/DSN 246/263

705 CTS/CC	(505) 846-1472/1
705 CTS/DO	(505) 846-9109
705 CTS/ADO	(505) 853-0036
705 CTS/CCE	(505) 853-1471

### 505th TRAINING GROUP (505 TRG)

505 TRG/CC	(850) 884-3304
505 TRG/CD	(850) 884-3328
505 TRG/CD-D	(850) 884-1238
505 TRG/CD-T	(850) 884-9285
505 TRG/CCE	(850) 884-3304
505 TRG/CEM	(850) 884-5599
705 TRS/CC	(850) 884-1650
705 TRS/DO	(850) 884-5907
705 TRS/Supt	(850) 884-5431
705 TRS/CCS	(850) 884-4367
OCTP Schedule/Coord	(850) 884-5946
OCTP Schedule/Coord	(850) 884-5947
505 TRS/CC	(850) 884-7611
505 TRS/DO	(850) 884-7612
505 TRS/Supt	(850) 884-6840
OLAA/CC-Ft McPherson	DSN 367-0914
OLAA/NCOIC-Ft McPherson	DSN 367-0560
505 CTS/CC	(850) 884-5683
505 CTS/DO	(850) 884-3255
505 CTS/CEM	(850) 884-5590
505 CS/CC	(850) 884-9450
505 CS/DO	(850) 884-9452
505 CS/Supt	(850) 884-5882





“Without air and space control, our ability to conduct military operations would be severely limited, our joint teammates subjected to unacceptable risk, and our strategic choices constrained.”

“Airmen are the world’s recognized experts in executing effective, high-volume command and control of air, space, and cyber operations.”

“In the coming year, we must focus on continuing to provide air, space, and cyber control that combatant commanders have come to expect.”



DELIVERING C2 COMBAT CAPABILITY