

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

**AIR FORCE MANUAL 13-1 CRC,
VOLUME 3**



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***Nuclear, Space, Missile, or Command and
Control Operations***

***OPERATING PROCEDURES CONTROL
AND REPORTING CENTER (CRC)***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This publication implements Department of the Air Force Policy Directive (DAFPD) 13-1, *Command and Control (C2) Enterprise*. This publication applies to all civilian employees of the Department of the Air Force (DAF) and the uniformed members of the Regular Air Force and Air National Guard (ANG) performing Ground Battle Management for the C2 enterprise. It does not apply to the uniformed members of the United States Space Force, or the Air Force Reserve. Air Education and Training Command (AETC) formal training units (FTUs) will take for reference only to ensure equitable operations standards and commonality in development of guidance and training programs as it pertains to the Control and Reporting Center (CRC). Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*. Route DAF Forms 847 from the field through the appropriate functional chain of command. This publication may be supplemented at any level. See [paragraph 1.3](#) for specific requirements for coordination prior to certification and approval. The authorities to waive wing or 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 Department of the Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor’s commander for non-tiered compliance items. Commanders may waive non-tiered

requirements, but must send a copy of the approved waiver to the OPR of the higher headquarters publication being waived within 30 days of approval. See [paragraph 1.4](#) for further information on waiver authorities. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the DAF. Compliance with Attachments [2](#) and [3](#) is mandatory.

SUMMARY OF CHANGES

This updated manual incorporates substantial revisions and should be reviewed in its entirety. Significant changes include: the removal of Mission Commander and Operations Coordinator, and the amendment of training prerequisites for Senior System Operator (SSO) and Mission System Operator (MSO).

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Chapter 1

GENERAL INFORMATION

1.1. General. This publication guides the operational readiness and employment of the CRC. Instructions for reference includes, but not limited to: Air Force Manual (AFMAN) 13-1 GBMC2 Volume 2, *Ground Battle Management Command and Control (GBMC2) Standardization/Evaluation Program* and AFMAN 13-1CRC Volume 2, *Control and Reporting Center (CRC) - Evaluation Criteria*.

1.1.1. As a key command and control (C2) element of the Theater Air Control System (TACS), the CRC is subordinate to the Air Operations Center (AOC) in accordance with Air Force Tactics, Techniques and Procedures (AFTTP) 3-1-S/NF, *Air Operations Center (AOC)* and AFTTP 3-3 AOC. The CRC is responsible for conducting wide area surveillance, fusing, and forwarding the composite surveillance information, and providing battle management of air operations. The CRC directly supports the Joint Forces Commander (JFC) and the Combined Forces Component Commander (CFACC) and/or Joint Forces Air Component Commander (JFACC). The CRC is normally under the operational control of the JFACC and provides, as delegated, decentralized execution of air operations in an assigned battle management area.

1.1.2. The CRC will normally execute and operate in accordance with the CFACC's or JFACC's joint air operations plan, air operations directive, master air attack plan, rules of engagement (ROE), area air defense plan, air tasking order (ATO), operational tasking data link, tactical operational data, airspace control order and special instructions. The CRC is vertically integrated with the AOC and horizontally with the other TACS elements (e.g., E-3C/G Airborne Warning and Control System or Air Support Operations Center). It also integrates with joint C2 resources (e.g., the TAGS). AFTTP 3-2.17, *Multi-Service Tactics, Techniques, and Procedures for the Theater Air-Ground System (TAGS)* provides integration procedures for each service C2 and airspace management systems.

1.2. Keywords and Definitions .

1.2.1. "MUST" and "WILL" indicate a mandatory requirement.

1.2.2. "SHOULD" indicates a preferred, but not mandatory, method of accomplishment.

1.2.3. "MAY" indicates an acceptable or suggested means of accomplishment.

1.2.4. "**Note:**" indicates operations procedures, techniques, etc., considered essential to emphasize.

1.2.5. Crewmembers in this manual includes members who are assigned or attached.

1.3. Supplements . Major commands (MAJCOMs) (e.g., Air Combat Command (ACC), United States Air Forces Europe-Air Forces Africa (USAFE-AFAFRICA), and National Guard Bureau (NGB)) will coordinate their MAJCOM supplements to this manual with Headquarters Air Force (HAF), Air Force (AF) Exercises and Training Division (AF/A3TE) before publication. Prior to submission, MAJCOM/Operations Divisions (A3) will approve MAJCOM supplements. These supplements will not duplicate, alter, amend or be less restrictive than the provisions of this manual. **(T-1)** Copies of MAJCOM-level supplements, after approved and published, will be provided by the issuing MAJCOM to AF/A3TE, ACC Command and Control and Intelligence

Surveillance and Reconnaissance Division (ACC/A3C), the user MAJCOM, and National Guard Bureau Director of Operations (NGB A3/10) OPR.

1.3.1. Units will coordinate their supplements with the next higher group, as applicable, prior to MAJCOM approval. **(T-2)** MAJCOM office of primary responsibility will approve unit supplements. NGB units will coordinate their supplement with NGB A3/10 who in-turn will forward to ACC/A3C for coordination. **(T-2)**

1.3.1.1. Supplemental guidance will not be less restrictive than the basic publication but can be more restrictive. **(T-2)**

1.3.1.2. Supplemental guidance will not contradict this manual. **(T-1)**

1.3.2. Additional forms required by MAJCOM supplements are approved and issued as AF Forms if they apply to more than one command and comply with Department of the Air Force Instruction (DAFI) 90-160, *Publications and Forms Management*.

1.3.3. Guidance for MAJCOM and unit supplements is provided in DAFI 90-160 and DAFMAN 90-161.

1.4. Waiver Authority. Submit waiver requests through the chain of command to the appropriate Tier waiver authority or alternately to the requestor's commander for non-tiered compliance items.

1.4.1. Waivers will be forwarded to ACC Standardization Branch (ACC/A3TV) (with copies provided to ACC Ground Battle Management Systems Branch (ACC/A3CG)).

1.4.2. Approved waivers will be forwarded (and/or filed) with the ACC/A3TV, with copies provided to ACC/A3CG.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. General. This manual establishes the roles and responsibilities, procedures, and guidance applicable to the conduct of operations of the CRC weapon system. Additionally, the manual provides operational guidance to the Air Control Squadron (ACS) Commander (CC), Director of Operations (DO), operations supervisors, mission crewmembers, maintenance and/or support personnel (where applicable). The CRC is comprised of the AN/TYQ-23A tactical air operation module, and associated mission computers, surveillance, and communication systems. This volume, in conjunction with other governing directives, prescribes those procedures applicable to the operation of the CRC under most anticipated circumstances. It is, however, not a substitute for sound judgment on the part of the CC and/or DO and CRC personnel. Operational procedures not specifically addressed in this, or other accompanying guidance may be implemented if it enhances safe and effective mission accomplishment. The Air Control Squadron Commander (SQ/CC) will report deviations performed without waiver, through channels to ACC/A3CG within 48 hours, followed by a written report. **(T-3)**

2.1.1. This AFMAN provides that in the absence of additional guidance, CRC mission crewmembers operating equipment other than system of record (i.e., non-system of record) will use this volume as a baseline for conduct of operations at the discretion of the SQ/CC with higher echelon authority. **(T-3)**

2.1.2. This publication does not provide tactics, techniques, and procedures for employing the CRC in a combat or contingency environment. However, guidance for tactical employment of the CRC can be found in the following: AFTTP 3-1-S/NF CRC, *Tactical Employment – CRC*; AFTTP 3-3.CRC, *Combat Aircraft Fundamentals – CRC*; AFTTP 3-3.TACS, *Theater Air Control System (TACS)*; AFTTP 3-2.17; AFTTP 3-1.IPE-S/NF, *Integrated Planning and Execution*; AFTTP 3-3.IPE; and the *CRC Concept of Employment*; AFMAN 11-214, *Air Operations Rules and Procedures*, provides tactics, techniques, and procedures considerations for both training and contingency operations.

2.1.3. Offices of collateral responsibility for this publication are USAFE-AFAFRICIA Command and Control Management Branch (USAFE-AFAFRICA/A3ZJ) and NGB A3/10. This publication does not apply to AETC operations and should only take for reference.

2.2. Scope. For the purposes of this AFMAN, the 552d Air Control Group and 752d Operations Support Squadron will be referred to as “Group” throughout this AFMAN, and references to “Higher Headquarters” includes HAF, MAJCOM, and Numbered Air Force (NAF) operations functions.

2.3. Headquarters Air Force (HAF).

2.3.1. Air Force Training and Readiness Directorate (AF/A3T). Establishes directives and guides the execution and operations of the CRC weapon system.

2.3.2. AF/A3TE.

2.3.2.1. Reviews and processes this manual for publication.

2.3.2.2. Reviews MAJCOM supplements to this AFMAN to ensure compliance with basic guidance in this manual.

2.3.2.3. Maintains liaison with HAF organizations, MAJCOMs, and career field managers to ensure compliance by all unit supervisory staff and mission crewmembers.

2.3.2.4. Coordinates with HAF organizations and MAJCOM operations functions to ensure guidance in separate AFIs and AFMANs conforms to and complies with basic AF guidance contained in this manual.

2.4. Major Commands (MAJCOMs). ACC/A3C is the office of primary responsibility for this volume. ACC, in conjunction with NGB and USAFE-AFAFRICA, is primarily responsible for establishing administrative processes. Lower echelons of command are primarily responsible for providing overarching guidance and monitoring the applicability and adherence of established operations procedures.

2.4.1. ACC is designated lead command for the CRC weapon system.

2.4.2. MAJCOM staffs are encouraged to maintain qualification and/or certification currency in CRC mission crewmembers' functional positions.

2.4.3. ACC supplements this manual as necessary and will review NAF, Group, and unit supplements to this manual.

2.4.4. NGB and USAFE-AFAFRICA supplements are sent to ACC/A3C for coordination prior to submitting for Air Force Deputy Chief of Staff for Operations (AF/A3) approval.

2.4.5. ACC convenes conferences and working groups as necessary, to review and improve CRC operational guidance and procedures.

2.4.6. ACC coordinates and processes applicable DAF Forms 847 through command channels (e.g., Group, NAF (as applicable), and MAJCOM), and in accordance with DAFI 90-160, and forward to ACC/A3TV for processing. ANG units will utilize the NAF and/or MAJCOM command structure with oversight responsibility and notify NGB A3/10.

2.4.7. ACC ensures compliance with AFI and/or AFMANs and technical orders (T.O.s).

2.4.8. ACC coordinates with safety offices and other government agencies to assist in evaluation and/or determination of safety of flight and/or aircraft mishaps as requested and to determine and immediately initiate appropriate published corrective actions.

2.4.9. ACC conducts staff assistance visits to subordinate units at the request of the SQ/CC and coordinates through the applicable MAJCOM Gatekeeper. For further guidance, see DAFI 90-302, *The Inspection System of the Department of the Air Force*.

2.4.10. ACC observes execution of unit missions and/or training events, etc. when feasible, providing applicable feedback.

2.4.11. ACC provides functional area guidance to subordinate wings, groups and/or units. Establishes procedures in MAJCOM supplements, if applicable.

2.4.12. ACC addresses time sensitive changes by AF Guidance Memorandum. Coordinates guidance in accordance with DAFI 90-160 with NGB A3/10 and USAFE-AFAFRICA/A3ZJ so that appropriate guidance can be issued in coordination with those MAJCOMs.

2.5. Wings and/or Groups.

2.5.1. Resolves major operational issues that arise between units within their purview. The lead MAJCOM will perform this action for ANG subordinate CRC units.

2.5.2. Provides staff support and assists units to meet unit type code (UTC), mission capability statements, and missions' essential tasks readiness requirements.

2.5.3. Forwards recommended supplements to this manual and any supporting documents to the parent MAJCOM for review.

2.5.4. Identifies operational shortfalls that adversely affect combat capability through appropriate channels in accordance with AFI 10-201, *Force Readiness Reporting*.

2.5.5. Reviews & maintains duty position descriptions for all assigned positions.

2.6. Squadron Commanders (SQ/CCs).

2.6.1. Ensures the CRC will be equipped, organized, and the assigned operations personnel are trained to a combat mission ready (CMR) and/or basic mission capable status. **(T-3)**

2.6.2. Ensures CRC maintenance and support personnel are trained to perform their duties and responsibilities to positively affect operational mission accomplishment to meet the unit's mission capability statement and mission essential tasks readiness requirements. **(T-3)** SQ/CCs will report deviations through the operational chain-of-command tactical control authority. **(T-3)**

2.7. Organization.

2.7.1. ACC/A3 and USAFE-AFAFRICA/A3ZJ provides management of their respective command operations programs and establishes responsibility for implementation of the program as outlined in this manual.

2.7.2. ACC/A3C provides guidance to conduct CRC operations and implements the program as outlined in this manual, safely and efficiently, in coordination with National Guard Bureau Director of Operations (NGB A3/10) and USAFE-AFAFRICA/A3ZJ.

2.7.3. Each MAJCOM may use CMR and/or basic mission capable augmentees from other MAJCOMs to support or conduct cross-command program reviews of operations procedures, with coordination and concurrence of the MAJCOM organizations involved (e.g., ACC/A3CG, USAFE-AFAFRICA/A3ZJ, and NGB A3/10). Augmentees will use the criteria of the MAJCOM they are augmenting. Augmentees will be CMR and/or basic mission capable in the mission design series of the unit in which they are supporting; further guidance found in AFMAN 13-1CRC Volume 1, *Control and Reporting Center (CRC) – Training*. **(T-3)**

2.7.4. Squadron leadership is defined as the CC, DO, and senior operations enlisted (i.e., E-8 and E-9) personnel. Squadrons are encouraged to exercise flexibility when creating and executing tailored operations training plans which will allow squadron leadership to capitalize on personnel with previous Battle Management Command and Control (BMC2) platform experience. This will also have the added benefit of allowing allocation of training resources to less experienced operators. While flexibility is encouraged, all training guidance can be found in AFMAN13-1CRCV1. It is not the intent for squadron leadership to be assigned to a formed mission crew and this should be done strictly by exception only.

Chapter 3

DEPLOYMENT AND MISSION PLANNING

3.1. Deployment Planning. The deployment of the CRC in whole or part may be required to directly support an Air and Space Expeditionary Task Force or an Air and Space Expeditionary Force contingency operations regardless of location, complexity, and duration with little or no warning.

3.1.1. Future operational contingency environments may dictate employing the CRC in dynamic, non-traditional configurations. Consideration of employment risk options must be considered when operating from either a main operating base, forward operating base, or deployed radar site, in contested and/or highly contested environments that may cover vast geographical areas of operations. **(T-3)**

3.1.2. Dynamic employment continuum requires the SQ/CC to exercise flexibility to mitigate risks with consideration for mission requirements in concert with recommending optimum placement. However, CCs must retain the capability to react and adjust CRC placement as the threat environment moves along the uncontested to the highly contested tactical threat spectrum. **(T-3)** CRC personnel should consult AFTTP 3-1.IPE, for additional considerations.

3.1.3. In anticipation of or the actual receipt of the deployment warning order, the SQ/CC will activate the unit deployment control center to facilitate deployment planning in accordance with AFI 10-403, *Deployment Planning and Execution*. **(T-3)** The SQ/CC will determine the unit deployment control center manning, but effective deployment planning must be inclusive of the entire CRC complex to include operations, support, and maintenance. **(T-3)** AFTTP 3-1.CRC and AFTTP 3-3.CRC series volumes should be referred to for an extensive set of deployment checklists and planning considerations. In addition, the SQ/CC must take proactive pre-warning order steps in consideration of the actual deployment to include site surveys as time and resources permit. **(T-3)**

3.1.4. The SQ/CC will organize and plan, deploy, and execute tasked missions through employment of UTCs: CRC Lead Element (7FVBL), Follow-BMC2 (7FVWL), and Deployed Radar (DR) (7FVDC) UTCs. **(T-3)** In addition, the ANG employs the Mission Equipment Technical Specialist (7FVBW) UTC. Required associated communications, support vehicles, and equipment are resident with the 7FVBL, 7FVWL, and 7FVDC UTCs. However, 7FVBL, and 7FVWL UTCs are not considered mobile and will require host operating base logistical support. The 7FVDC UTC maintains a fully mobile capability.

3.2. Mission Planning. The SQ/CC will actively direct the execution of the unit's operation's schedule and mission planning effort; however, the CC may delegate authority to the DO. **(T-3)** The CC and/or DO will ensure that all operations personnel are provided with the requisite support to plan and execute the mission. **(T-3)** They will ensure the mission crewmembers and mission planners have no barriers to mission planning and ensure that every mission is thoroughly planned, briefed, executed, and debriefed. **(T-3)**

3.2.1. The responsibility for the conduct of mission planning is shared between mission crew leads and the designated mission planning cell (MPC) chief. In coordination, they will ensure the CRC is properly prepared for the assigned tasking. **(T-3)**

3.2.2. The CC and/or DO will ensure that the intent of mission planning, whether for an in-garrison daily training event or contingency operations, is to prioritize and focus the efforts of the CRC and in particular the mission crewmembers to meet established training objectives. (T-3) Additionally, an objective in the case of contingency operations is the responsibility for radar surveillance and the direction and/or control of air operations supporting the CFACC or JFACC. The CC will delineate areas of responsibility, fully develop courses of action (COAs), identify required resources, and identify, evaluate, and mitigate risks and/or threats. (T-3)

3.3. Mission Planning Cell (MPC). The MPC ensures that mission crewmembers have access to the most current operational and intelligence information for effective mission execution derived from all available sources. (T-3) The SQ/CC may activate the MPC while still in-garrison in anticipation or receipt of a real-world alert, warning, or execute order. The CRC MPC is the single point of contact for the planning, tactical level coordination, and briefing and/or debriefing of tasked completed missions. The MPC chief will ensure that the necessary mission and support equipment has been identified, available, and configured to execute the tasked mission. (T-3) The MPC Chief (Section Lead (SL)), and staff (e.g., Air Battle Manager (ABM), Air Surveillance Technician (AST), Senior System Operator (SSO), Interface Control Technician (ICT), Mission System Operator (MSO), and/or Intelligence (INTEL) personnel) will ensure the mission crew is provided the most current information for effective mission execution. (T-3) In addition to MPC members maintaining CMR or basic mission capable status, selected individual crewmembers (i.e., ABM, AST, ICT, and MSO), should complete additional training (e.g., tactical data link (TDL)) courses in accordance with [Table 3.1](#) below. The MPC should also be activated for mission training exercises to develop, exercise, and validate unit planning tactics, techniques, and procedures. The unit will maintain a MPC in accordance with [Table 3.1](#). (T-3) However, the SQ/CC may choose the appropriate manning to meet mission tasking. The Group/CC (or equivalent) may issue a waiver for the qualification and certifications requirements detailed in [Table 3.1](#).

Table 3.1. CRC Mission Planning Cell (MPC) Manning

Function	#	Qualification and/or Certification
MPC Chief	1	W13B3D, SL - certified ABM
Deputy MPC Chief	1	W13B3D, SL - certified ABM or W1C5X1D
Air Battle Manager (ABM)	2	1x JICO, (JT301*, SEI-Y8H**)
Air Surveillance Technician (AST), Mission System Operator (MSO), and/or Senior System Operator (SSO)	2	1x Master of TDL Employment. (JT310*, SEI-1BD**)
Interface Control Technician (ICT) and/or Mission System Operator (MSO)	2	1x Multi-TDL Advanced Joint Interoperability (JT-102, SEI-1BB**), 1x Multi-TDL Ops Planner Manager (JT-201, SEI-1BC**)
Weapons Director (WD)	8	2 of 8 WD (SEI-904**)
Intelligence (INTEL)	3	3x 1N0X1***
<p>Notes: *Prerequisite Course for JT301/JT310 are JT102 and JT201. **Special Experience Identifiers (SEIs) ***ANG CRCs are authorized one Air Force Specialty Code (AFSC) 14N and two AFSC 1N0X1. If necessary, qualified personnel from the mission crew may augment the MPC as required. MPC may be tailored in size, and/or manning, and/or grade to meet mission requirements. MPC personnel may also substitute for mission crewmembers if required. Prerequisites guidance can be found in AFMAN 13-116 <i>Tactical Data Link Planning and Operations</i>.</p>		

3.4. Intelligence (INTEL). The unit INTEL personnel provide the SQ/CC and mission crew through the MPC, accurate, timely intelligence support to enhance operations mission planning to effectively execute assigned missions; further guidance found in AFI 14-1020, *Intelligence Mission Qualification and Readiness*. The unit intelligence section within the MPC is responsible for, but not limited to the following:

3.4.1. INTEL personnel will be responsible for planning and executing the CRC intelligence functions during all phases of operations to include, but not limited to mission planning, unit theater certification program, threat analysis, threat training, briefing and/or debriefing support, and after mission reporting through directed channels. **(T-3)**

3.4.2. INTEL personnel will ensure the unit is equipped with all intelligence systems, checklists, and reference library required to support operations. **(T-3)**

3.4.3. Guidance for INTEL personnel to organize, train and be evaluated is provided in AFI 14-1020, as applicable.

3.4.4. If no unit intelligence personnel are assigned and/or available, the Squadron Commander (SQ/CC) and/or Director of Operations (DO) will initiate a memorandum of agreement for unit INTEL support with the appropriate host wing and and/or group organization. **(T-3)**

3.4.5. Mission Planning, Briefing and/or Debriefing. Mission planning, briefing and/or debriefing and reporting guidance can be found in accordance with AFTTP 3-3.CRC and briefing and debriefing guides found in the CRC crew aids checklists.

3.5. Mission Planning Task Overview. AFTTP 3-1.CRC; AFTTP 3-3.CRC; AFTTP 3-1.IPE; and AFTTP 3-3.IPE, should be consulted for more in-depth deployment, employment and operations planning considerations. If the MPC is not activated, mission crewmembers will accomplish, as a minimum, the following items:

3.5.1. Review all relevant operational mission documents to include, but not limited to joint air operations plan, air operations directive, master air attack plan, ROE, ATO, airspace control order, airspace control plan, operational tasking data link, tactical operational data, and special instructions. **(T-3)**

3.5.2. Develop a communication plan and obtain equipment status from the unit Communications Focal Point (CFP) Section. **(T-3)**

3.5.3. Manipulate standard crew profile and perform updates to meet mission requirements. **(T-3)**

3.5.4. Perform post mission data analysis and/or reconstruction and archive mission results as required. **(T-3)**

3.5.5. Plan radar, communications, and TDL employment with applicable mission objectives, directives, local operating procedures (LOPs), checklists and guides. **(T-3)**

3.5.6. Assess impact of equipment limitations and develop COAs to mitigate risk to mission operations. **(T-3)**

3.5.7. Coordinate CRC mission interests with the AOC Chief of Combat Plans division and/or the appropriate section of the joint air operations plan, master air attack plan, ROE, air operations directive, ATO, airspace control order, airspace control plan, operational tasking data link, tactical operational data, special instructions, etc. **(T-3)**

3.5.8. Coordinate with the AOC CRC liaison officer for the integration of the CRC into theater employment plans for specific CRC planning factors and issues. **(T-3)**

Chapter 4

OPERATIONS

4.1. Operations. The CRC has the capability to conduct BMC2 of forces, including assuming the role and responsibilities of Regional Air Defense Commander (RADC) or Sector Air Defense Commander (SADC), and the functions of airspace management found in Joint Publication (JP) 3-52, *Joint Airspace Control*, air surveillance, combat identification, and TDL operations. The mission success is dependent upon operationally configured equipment, systems and assigned personnel in CMR and/or basic mission capable status to prosecute the mission. Unit personnel and mission crewmembers will be thoroughly prepared to practice communications and operations security in accordance with AFMAN 17-1302-O, *Communication Security (COMSEC) Operations*, and AFI 10-701, *Operations Security (OPSEC)*, and be knowledgeable of current friendly and adversary operation's information to effectively operate in contested and highly contested environments with fully operational or degraded systems. **(T-3)** To operate within the combatant command's directives, the CRC may be required to mobilize and deploy assigned personnel and/or equipment. If unit deployment is required the CRC will, within 24 uninterrupted hours upon arrival at the designated employment site (e.g., main operating base, forward operating base, or deployed radar site), declare the ability to meet the combatant command's tasked requirements. **(T-3)**

4.2. Control and Reporting Center (CRC) Function and Mission. The CRC function is to facilitate decentralized execution of joint or combined air operations on behalf of the CFACC or JFACC. The CRC executes its assigned mission as assigned by the CFACC or JFACC, in accordance with the joint air operations plan. Additionally, the CRC will support the CFACC or JFACC air operations current planning and execution effort by maintaining a common tactical picture which contributes to an integrated AOC common operational picture. **(T-3)** The physical placement, location, and configuration of a CRC to conduct these operations are tailorable and flexible to best meet mission objectives in their assigned area of responsibility or battle management area.

4.2.1. Battle Management Command and Control (BMC2). BMC2 of air forces is the management of activities within the operational environment based on the commands, direction, and guidance given by appropriate combatant command's authority. C2, including battle management, is the binding element that integrates capabilities and operations within and among joint forces. Battle management entails visualizing and employing where, when, and with which forces to apply capabilities to achieve assigned mission objectives.

4.2.2. BMC2 of air forces for the CRC is the art of translating real-time battlespace awareness, operational guidance (e.g., execute delegated authorities), and combat potential into decisive action at the tactical level. CRC BMC2 is enabled by CMR operators using battlespace situational display computer operator workstations (OWSs), and robust communications equipment to receive, display and interpret battlespace information to include space and cyberspace information and taking tactical action based on the near real-time situation. The equipment suite provides an intuitive human machine interface (e.g., visual displays, communications connectivity, and the network centric interoperability systems and components) that enable CRC operators to make decisive and timely tactical decisions in the battlespace. Effective BMC2 requires situational awareness, managing available resources,

directing, and controlling the correct tactical action in a timely manner, and monitoring and assessing mission execution. To execute the CRC mission, the CRC conducts and/or provides the following mission essential functions:

4.2.2.1. Weapons Control. The CRC supports and/or coordinates defensive counter air and/or offensive counter air, air interdiction, air refueling, close air support, combat search and rescue and/or personnel recovery, high value airborne asset protection, destruction and/or suppression of enemy air defenses, electronic warfare, intelligence, surveillance, reconnaissance, special operations, and the direction of air defense artillery weapon systems for theater air defense. Guidance to conduct these missions can be found in: JP 3-09; *Joint Fire Support*; Air Force Doctrine Publication (AFDP) 3-0, *Operations and Planning*; AFDP 3-01, *Counterair Operations*; AFDP 3-03, *Counterland Operations*; AFDP 3-05, *Special Operations*; AFDP 3-27, *Homeland Operations*; AFDP 3-30, *Command and Control*; AFDP 3-50, *Personnel Recovery*; AFTTP 3-2.90, *Personnel Recovery*; AFDP 3-52, *Airspace Control*.

4.2.2.2. Air and Missile Defense BMC2. The CRC is organized, trained, and equipped to execute integrated air and missile defense. The CRC can assume the role as RADC or SADC on behalf of the Area Air Defense Commander, normally the JFACC. The mission for the CRC is to ensure its capabilities are integrated with overlapping TACS and joint elements to defend the homeland and deployed United States (US) or coalition assets. It is tied to the counter air mission that emphasizes integrating both offensive counter air with defensive counter air operations at the theater level to gain and maintain air superiority. Integration of the CRC into the existing TACS architecture includes the operational relationships, interfaces, and control capabilities and responsibilities with other overlapping BMC2 and lethal resources to defend US or coalition assets to gain and then maintain air superiority. Effective coordination between the CRC SL and the US Army Air Defense Artillery Fire Control Officer (ADAFCO) and/or US Army Air Defense Artillery Fire Control Assistant (ADAFCA) directing US Army air defense artillery assets is paramount to effect successful engagement of any air and missile threat regardless of type. When deployed, ADAFCO and/or ADAFCA personnel will be resident in the CRC and will augment the mission crew as required. **(T-3)**

4.2.2.3. Airspace Management. Airspace management is the implementation of the airspace control order on behalf of the AOC airspace control authority, normally the JFACC, in accordance with JP 3-52. The CRC provides positive and procedural airspace management with guidance from Air Land Sea Space Application (ALSSA) AFTTP 3-2.78, *Multi-Service Tactics, Techniques, and Procedures for Airspace Control (Airspace Control)*. These tasks include aerial refueling, pre- and/or post-strike force marshaling and recovery, airspace activation, enroute tactical flight following (e.g., tracking and deconfliction), procedural control in support of non-combatants, air interdiction, close air support, kill box interdiction, or strike coordination and reconnaissance. The CRC may also support continental US Air Defense and/or Homeland Security in accordance with AFDP 3-27. The CRC implements airspace control order elements to include tanker anchors, transit boulevards, air routes, and other airspace control measures to route aircraft safely and efficiently through the battle management area enroute to their designated working areas. Airspace control measures will be created dynamically with the use of restricted operating zones, high density air control zones, missile engagement zones, and

joint engagement zones, etc., and requires flexibility and attention to detail to manage effectively and safely. (T-3)

4.2.2.4. Air Surveillance. The SL and AST/SSO/MSO will ensure a recognizable air picture is established internal to the CRC and provided to CRC operators and supported friendly forces. (T-3) Operators will detect, identify, classify, and track airborne objects within sensor coverage for its assigned area of responsibility. (T-3) Operators will correlate, prioritize, and apply all-source and/or sensor data into its common tactical picture, and forward the picture providing battlespace awareness to the AOC's common operational picture which displays a fused and correlated air, ground, and maritime sensor data picture. (T-3)

4.2.2.5. Combat Identification. The CRC has a limited capability to determine combat identification through positive and procedural means. It has the capability, once established, to disseminate timely, accurate, and relevant positive identification information to allow successful engagement of hostile targets in accordance with theater ROE. In addition to organic system capabilities that support lack-of-friendly and presence-of-friendly characterization (e.g., identification, friend, or foe/selective identification feature (IFF/SIF), the CRC leverages combat identification capable off-board assets and processes, to provide the CRC a fused-sensor positive identification capability.

4.2.2.6. Tactical Data Link (TDL) Management. The SL and AST/SSO/MSO will ensure an optimum common tactical picture is planned, established, managed, and provided, to operations internally and provided to supported external friendly forces through effective TDL management. (T-3) TDL management is facilitated by the effective planning, analysis, and monitor of the multi-tactical data link network(s). It includes the reception of sensor data (i.e., from organic AN/TPS-75 radar system(s) and additional external sensors), processing, and forwarding of the CRC recognizable air picture to the AOC and other BMC2 nodes to include lateral joint agencies. The CRC consolidates organic (i.e., AN/TPS-75), and non-organic sensor data into the CRCs common tactical picture for distribution over established TDLs. It is also responsible for the digital display and transfer of battle management data via data link message sets and commands. Additionally, under the direction of the AOC's Joint Interface Control Officer, the CRC may be tasked to manage a region or sector of the multi-tactical data link network(s) architecture within its area of responsibility and therefore assume the role of Region or Sector Interface Control Officer. The CRC supports Joint Range Extension Application Protocol A, and/or B, and/or C, Satellite-J, Serial J, Link 11, Link 11B, Link 16, and Situation Awareness Data Link. The CRC can act as a data forwarder by transmitting its tactical data vertically and/or horizontally to the AOC and other lateral, joint, or combined theater C2 nodes. The Joint Interface Control Officer is responsible for the planning, establishing, and maintaining the theater multi-tactical data link network(s) and providing a common tactical picture input to the joint data network for integration into the AOC's common operational picture.

4.3. Declaring Operational Status. A fully mission capable system is the ultimate objective of the maintenance effort. This manual, crew aid checklists, unit, theater contingency LOPs and special instructions, as applicable, outlines the conditions to declare operational status for both contingency and in-garrison operations. In the absence of directive theater guidance, the minimum operational requirements outlined in the CRC crew aids in conjunction with the below listed items are used to declare operational status. In general terms, the Commander and/or DO will utilize the

following in declaring operational status in a deployed environment: (1) securing and completing site bed-down (if required), (2) critical mission equipment operational, (3) priority communications and datalinks are established per training, exercise plan, theater operations plan, or Annex K, *Theater Communications Plan*, and (4) CMR and/or basic mission capable mission crew briefed and in position and able to conduct mission operations will constitute declaration of status. **(T-3)**

4.3.1. The SL for contingency operations or the senior ranking operator for in-garrison training missions will declare and then report the operational status of the weapons system based on the operational tasking through appropriate reporting channels. **(T-3)** The SL or senior ranking officer will report the estimated time required to return to fully mission capable. **(T-3)** Mission capable status is characterized and reported as meeting one of the following:

4.3.1.1. Fully Mission Capable. All mission support systems, subsystems, and components are functioning as designed. Fully mission capable provides the capability to fully accomplish 100% of the mission objectives tasked by the CFACC or JFACC or the established in-garrison training objectives without mission degradation or impact.

4.3.1.2. Partially Mission Capable. One or more mission support systems, subsystems, or components are not functioning. Partially mission capable status denotes an ability to accomplish some, but not all, of the established mission objectives tasked by the CFACC or JFACC or the established in-garrison training objectives while experiencing partial mission degradation.

4.3.1.3. Non-Mission Capable. The total inability to accomplish the assigned mission objectives tasked by the CFACC or JFACC or any portion of the established in-garrison training objectives due to failure of mission support systems, subsystems, or components.

4.3.1.4. Risk Mitigation. After thorough risk mitigation in accordance with AFI 90-802, *Risk Management*, and AFPD 10-24, *Mission Assurance*, the SL, or the senior ranking operator (i.e., for in-garrison training missions), will determine a course of action for the feasibility of continuing mission operations under degraded conditions (e.g., degraded sensors, support equipment, required CMR and/or basic mission capable personnel). **(T-3)**

4.3.2. Guidance as provided by unit or theater LOPs and special instructions take precedence over these published minimums when applicable. The SL will, after ensuring the minimum mission capable and risk mitigation requirements are met, call the CFP and in turn higher echelon authority (e.g., AOC, if required) to declare operational status. **(T-3)** The following, but not limited to the following will be considered prior to declaring operational status:

4.3.2.1. Previously planned UTCs are on-site and operational to accomplish the tasked mission. **(T-3)**

4.3.2.2. The CRC SL regardless of having received a threat assessment by appropriate higher echelon authority (e.g., AOC), will establish acceptable risk to the CRC. **(T-3)**

4.3.2.3. SL and AST/SSO/MSO will complete the step positional briefings (or the MPC step briefing) to their respective battle management team (BMT) and/or sensor operations team (SOT) prior to reporting to their respective duty positions in the tactical operations center (TOC). **(T-3)** The SL and AST/SSO/MSO will update the mission crewmembers with changes as appropriate. **(T-3)**

4.3.2.4. Once equipment is released to the mission crew, crewmembers will initiate checkout of equipment utilizing unit mission crew aids, LOPs, and standard operating procedures as appropriate. **(T-3)**

4.3.2.5. Periodic radar evaluation program (PREP) assessment will be completed on the units' radar(s), to include the DRs, by the Electronic Protection Technician (EPT) (or certified PREP crewmember), and status and/or results reported to the SL/AST/SSO/MSO. **(T-3)**

4.3.2.6. Sensor correlation checks will be completed by the SL and/or AST/SSO/MSO to determine optimum or minimally acceptable radar and IFF/SIF settings as referenced in LOPs, letters of agreement and/or memorandums of understanding, mission crew aid checklists, worksheets, or as specified in Federal Aviation Administration (FAA) JO 7610.14, *Non-Sensitive Procedures and Requirements for Special Operations*, if tasked as a military radar unit or tactical monitor. **(T-3)**

4.3.2.7. Database management which includes the battle management computer, support databases, and communication systems will be monitored to provide an accurate digital display and transfer of battle management data and commands. **(T-3)**

4.3.2.8. All mission support equipment (e.g., datalinks, radios, computer, encryption devices) must be available to conduct assigned tasking. **(T-3)**

4.3.2.9. The CRC has established communications with organizations exercising tactical control. In addition, communications are established with all external agencies and units in which the CRC must have immediate communications and datalink connectivity to effect mission operations. **(T-3)**

4.4. Flight Crew Information File (FCIF). The flight crew information file is multi-volume and available to mission crewmembers, consisting of current information essential to the conduct or mitigation of operations or emergency situations. The read file portion of the flight crew information file centralizes significant, time sensitive issues and procedures that are to be disseminated to operations personnel. The content and management of the flight crew information file is prescribed in AFMAN 13-1GBMC2 V2. The SL is responsible for ensuring all crewmembers review required read-files prior to assuming operational duties. **(T-3)**

4.5. Local Operating Procedures (LOPs). Each unit will create LOPs which will further define procedures for operating in-garrison training environment. **(T-3)** It may be necessary to also create LOPs for deployed locations if deemed necessary, for information not contained in theater guidance (e.g., special instructions).

4.5.1. DAFMAN 90-161, prescribes the paragraph method as the only authorized approach to supplement an AFMAN, therefore supplemented material must be arranged in accordance with the basic publication it is to supplement. Units may publish guidance in a single, stand-alone local operating instruction and/or manual instead of supplementing this AFMAN.

4.5.2. The DO will sign the unit's LOP and ensures it is filed in Volume 3 of the flight crew information file. **(T-3)**

4.5.3. The DO will ensure the LOP is reviewed for currency as required, or at least every 18 months and certifies with a memorandum for record. **(T-3)**

4.5.4. Interim changes (ICs) made to the LOP do not cause the LOP to expire. ICs are formally integrated into the LOP at the next 18-month review period. MFRs are not used to extend an LOP with ICs attached.

4.6. Mission Voice Recording. All missions involving the control of live aircraft will be recorded to the maximum extent possible. **(T-3)** Voice recording of missions is essential to provide necessary forensic information concerning declared aircraft emergencies, aircraft accidents, and/or any event resulting in a subsequent civilian or military investigation. Recording also provides an asset in debriefing and determining lessons learned and for the development of tactics, techniques, and procedures. Units will utilize a standard designating and labeling format for logging mission recordings. **(T-3)** Format is YYYYMMDD-Mission Profile-Last Name of mission crewmember (e.g., 20180615-DCA-Brady). **(T-3)**

4.6.1. Chat provides text-based, secure, real-time, persistent communications within the CRC external agencies. Chat recording logs will be maintained, marked, handled, stored, and disposed with guidance from Department of Defense Manual (DoDM) 5200.01 Volume 2_AFMAN 16-1404 Volume 2, *Information Security Program: Marking of Classified Information*, and AFI 33-322. **(T-3)**

4.6.2. Both video and voice recording media of training and/or operational mission events is required to be retained for instructional debrief or reconstruction of real-world events. The SL or higher authority may direct specific media products (to include Chat logs), to be retained and secured for a specific reason (e.g., aircraft accident or operational incident) of possible interest to both the mission crew or external agencies (e.g., FAA or USAF Accident Investigation Board). The SL will ensure the recorded media will be identified, marked, and retained in a secure container and/or electronic medium for a period of six months or until request is adequately satisfied. **(T-3)** When storing media, mark appropriately with the requester's name, rank, duty title, organization, and disposition instructions if known. In addition, annotate the media's classification (e.g., at least Secret), YYYYMMDD-Mission Profile-Last Name of mission crewmember (e.g., 20180615-DCA-Brady). The SL will ensure this information will also be logged in the Operations Logbook. **(T-3)**

4.6.3. The DO will ensure that personnel are trained, and that procedures are in place when required to provide immediate forensic reconstruction of media related to flight safety or critical mission events. **(T-3)**

4.7. Forms and Logs. This manual prescribes and directs the use of AF Form 4145, *Daily Activity Log* and AF Form 4146, *Mission Briefing Guide*. Units with access to the Learning Management System, the Patriot Excalibur system, or another MAJCOM-approved programs will use the applicable program as the primary system of documentation. **(T-3)** The DO will ensure AF Forms 4145, or locally generated equivalent forms are readily available to meet training and operational requirements in support of CRC daily operations prior to the start of mission operations. **(T-3)**

4.7.1. The SL, DO designee, or senior ranking operator will be responsible for the Daily Activity Log. **(T-3)** The form is required to be completed and signed at the completion of each mission crew shift and forwarded to the DO for approval and signature. The Daily Activity Log provides a complete summary of all mission crew operations for a particular shift and is an important tool for data correlation and analysis.

4.7.2. Mission crewmembers will use AF Form 4146 or locally generated equivalent form to brief missions, record mission results, and serve as a record of unit and individual control activities. **(T-3)** ABMs and/or WDs will use the form to record all control activities conducted and will forward to the SL for review and signature. **(T-3)** The AF Form 4146 or equivalent form will be attached to AF Form 4145 and submitted to the unit Host Aviation Resource Management office, with guidance from *1C0X2 Guide for Ground Based Radar Air Battle Manager Duties*, and DAFMAN 11-401, *Aviation Management*. **(T-3)**

4.8. Operations Logbook. The operations logbook is the official record of significant mission events that occurred during either in-garrison or real-world contingency operations. When in-garrison, the logbook will be maintained in accordance with squadron LOPs. **(T-3)** The purpose is to maintain an accurate and detailed record of all significant events pertaining to operations occurring during each mission crew shift or event. Of primary importance are specific events that may result in subsequent investigations. The logbook is not required for day-to-day training missions, but should be utilized for unit training exercises, field deployments, etc. The operations logbook is contained in a permanently bound ledger or journal, or through electronic recording methods. The SL will ensure the logbook is maintained exercising the following procedures:

4.8.1. Classification of the operations logbook or electronic medium will be marked to the highest classification of its content. **(T-3)** The logbook will be marked, handled, and stored in accordance with DoDM 5200.01V2 and AFMAN 16-1404V2. **(T-3)**

4.8.2. The SL or the responsible individual designated by the SL will ensure the logbook is opened at 0001Z or at the beginning of the duty day and closed at 0000Z or the end of the duty day. **(T-3)**

4.8.3. Record information not already noted and/or recorded in another authorized document or system unless it is deemed appropriate for clarity, understanding or classification. **(T-3)**

4.8.4. Record time of each entry (ZULU time) and call signs of unit(s) sending and/or receiving information. **(T-3)**

4.8.5. The SL or the responsible individual designated by the DO will annotate in the Operations Logbook their name and rank, crew position, and start/end time of their tour of duty. **(T-3)** This certifies all entries are accurate and reflect a complete record of the tour of duty. **(T-3)**

4.9. Operations Mission Crew Aid Checklists. Mission crew aid checklists (hereafter to be designated "crew aid checklists") are a standard set of documents that contain pertinent information extracted from applicable sources to facilitate mission execution. Crew aid checklists serve only as a guide and are not a substitute for directive guidance.

4.9.1. Crew aid checklists may contain as an example: charts, diagrams, unit and agency phone directories, unit listings, indexes, airspace and anchor depictions, and other unclassified reference information deemed useful to the conduct of mission planning and operations.

4.9.2. Crew aid checklists with approved ACC and unit supplemental materials, will be maintained, reviewed, and distributed in a manner deemed appropriate by the unit DO. **(T-3)** They will be made available on position for unit command center (UCC) and TOC personnel, or each mission crewmember will be issued an individual copy. **(T-3)** However, it will be the

individual mission crewmember's responsibility to ensure the crew aid checklists are on-hand or on-position and used as appropriate. (T-3)

4.9.3. Mark the classification of the crew aid checklists to the highest classification of its content. The crew aid checklists will be marked, handled, and stored in accordance with DoDM 5200.01V2/AFMAN 16-1404V2 and 5200.01 Volume 3/AFMAN 16-1404 Volume 3, *Information Security Program: Protection of Classified Information*. (T-3)

4.9.4. ACC/A3CG is responsible for maintaining the master copy of mission crew aids. The crew aids are available on the ACC/A3CG SharePoint® page at: <https://usaf.dps.mil/sites/10680/SitePages/Home.aspx>, filed under sub-file CRC Operations Information File (CRC OIF). The crew aid checklists are designed and formatted to be incorporated into standard 4" x 7" flight crew binders.

4.9.5. ACC-approved crew aid checklists are placed in the front of the binder. Unit supplemental material (e.g., LOPs, unit developed crew aid checklists) follow the ACC-approved crew aid checklist format.

4.9.6. Each unit develops internal currency review procedures to ensure crew aid checklists are current and reviewed at least annually. (T-3) Procedures will designate the unit reviewing authority and the first page of each crew aid checklist binder contains the date of the last review of the total checklist and the initials of the reviewer. (T-3) The reviewer's initials will signify the crew aids are current. (T-3)

4.9.7. The crew aid checklist titled, "*Controlled Aircraft Emergency*," will be the first crew aid checklist in any crew aid checklist binder. (T-3)

4.9.8. Recommended changes or improvements to crew aid checklists are initiated by submitting a memorandum for record through appropriate channels (i.e., Group, NAF (as applicable)), to ACC/A3CG. ACC/A3CG will review and approve or disapprove submitted recommendations and coordinate changes for incorporation. Once changes are incorporated, the applicable crew aid checklist(s) are posted to the ACC/A3CG SharePoint® (<https://usaf.dps.mil/sites/10680/SitePages/Home.aspx>). ACC/A3CG, notifies National Guard Bureau (NGB) A3/10 and USAFE-AFAFRICA/A3ZJ who in turn notifies respective units of specific changes via separate memorandum and/or message.

4.10. Crew Force Management. Proper manning, mission crewmember rest, fatigue management, and duty limitations are factors considered in effective mission crewmember management. This section prescribes mission duty period, mission duty hours, and mandatory rest duration for CRC mission crewmembers. Basic guidance for fatigue management strategies and waiver authority procedures follows:

4.10.1. Mission Duty Period. Mission duty period will commence when the mission crewmember arrives at the duty location for the mission briefing, mission, or other official duty and ends when the crewmember departs the duty location. (T-3) The normal crewmember mission duty period will not exceed 14 hours. (T-3) The SL will ensure that instances of extended mission duty period will be annotated in the operations logbook, at a minimum detailing authorizing official (e.g., appropriate waiver authority), extenuating circumstances, and crewmember(s) affected. (T-3)

4.10.2. Mission Duty Hours. Mission duty hours are calculated as those hours within the mission duty period when a current, qualified mission crewmember performs the assigned mission on position.

4.10.2.1. Intermittent relief on-position crewmembers of mission duties are provided by qualified CMR and/or basic mission capable spare crewmember or MPC personnel for bathroom breaks and short mealtimes, etc. **Table 4.2** prescribes the maximum mission duty hours worked for the prescribed periods.

4.10.2.2. To mitigate fatigue issues for extended periods of operations greater than 30 days, commanders should consider 10-hour shifts. Refer to AFTTP 3-3.CRC for determining the number of shifts (e.g., two or three shift periods), and the shift cadence. The SQ/CC, DO, and SL must consider additional non-operational essential taskings in the overall planning of the personnel duty day. **(T-3)**

4.10.3. Crewmember Rest. Rest is compulsory for crewmembers prior to performing all duties involving operations and consists of a recommended minimum of 10 non-duty hours before the mission duty period begins. Rest affords the crewmember free time and includes time for meals, transportation, and rest. This time must include an opportunity for at least 8 hours of uninterrupted sleep. **(T-3)** If any crewmember performs duties past the 1.5-hour period after crew debrief or other required crewmember duties, crewmember rest must not begin until post-positional duties are completed. **(T-3)** Each crewmember will be individually responsible to ensure he/she obtains sufficient rest during crewmember rest periods. **(T-3)** The owning parent and/or deployed operations group commander may waive all or any part of a crewmember rest period.

4.10.4. Consumption of Alcohol. Mission crewmembers will not perform CRC operational mission duties within 12 hours of consuming alcohol or other intoxicating substances, or if impaired by alcohol or any other intoxicating substance. **(T-0)**

4.10.5. Crew Scheduling. CRC mission crewmembers should be prepared for surge operations. Worst case scenario for initial operations provides the CRC in surge operations for indefinite periods of time. The CRC mission capability statement provides two mission crews for 24-hour continuous surge operations (12-hour shifts) for a period of 7 days, after which one additional mission crew be provided through appropriate UTC deployment. A fourth mission crew is provided at the 18th day for sustained operations for an indefinite period. **Table 4.2** below provides guidance for allowable mission duty hours not to be exceeded to plan and employ a prudent schedule with available resources.

Table 4.2. CRC Mission Duty Hours (MDHs)

Mission Duty Hours (MDH)*	Comment
No More Than (NMT) 85 MDHs in 8 days**	Waiverable by Group and/or CC
NMT 192 MDHs in 28 days	(T-3)
NMT 688 MDHs in 90 days	(T-3)
<p>Notes: These hour limitations apply to both in-garrison and deployment contingency operations. *MDHs are based on 12 hours on-position and 2 hours for duty associated duties. **The 8, 28, and 90-day limit is based on a mission crew working 12 hours on-position (i.e., a 14-hr. duty day, with brief & debrief), every day. This allows a total of 85 hours on-position.</p>	

Chapter 5

UNIT COMMAND CENTER (UCC)

5.1. Unit Command Center (UCC). The UCC is established by the ACS/CCs to facilitate centralized support of unit operations. The UCC facility is accommodated in an appropriate fixed or mobile shelter, and manned and equipped with unit personnel and equipment resources to allow the site support section and CFP sections to facilitate planning, directing, coordinating, and controlling mission operations and unit support activities. The SQ/CC will equip the UCC with appropriate procedural and emergency and quick response checklists, and other appropriate guidance (e.g., unit LOPs), and doctrinal documentation needed to respond to the full range of military or civil operations. **(T-3)** **Table 5.1** below provides recommended UCC sections and manning from unit or augmentation resources as required for mission operations:

Table 5.1. Control and Reporting Center (CRC) Unit Command Center (UCC) Manning.

Duty Position	Personnel
Commander or Director of Operations (CC or DO)	1*
Chief or Senior Enlisted Operator (1C5)	1**
Communications Focal Point (CFP) Section	X**
Regional and/or Sector Air Defense Commander (RADC/SADC) ***	X**
Notes:	
*The CC and DO at a minimum, will be qualified as an ABM, and certified as SL. (T-3)	
**Manning to be determined by CC and/or DO to meet mission needs.	
***RADC/SADC may also be resident in the UCC if not in the TOC.	

5.2. Unit Command Center (UCC) Duties. The SQ/CC and DO are ultimately responsible for the CRC's execution of the CFACC or JFACC guidance (e.g., joint air operations plan, ATO, and airspace control order). **(T-3)** Through the AOC Chief of Combat Operations, the CC/DO provides mission direction from the UCC. Units are not required to employ an in-garrison UCC, unless the CC or DO determines a large exercise or training event warrants employment. The CC or DO (also possibly designated as the RADC/SADC), 1C5, and CFP are resident in the UCC.

5.2.1. Squadron Commander (SQ/CC), AF Specialty Code (AFSC) 13B3D, (Non-waiverable), (Maj – Lt Col on G-series orders). The SQ/CC will ensure facilitation, planning, direction, coordination, and control of maintenance, mission and support activities for both in-garrison and deployed operations. **(T-3)** During tactical execution, the CRC is operationally subordinate to the AOC Chief of Combat Operations, and the SQ/CC is responsible for the CRCs implementing effective tactical battle management command and control (BMC2) by delegating proper execution authorities to internal CRC leadership (i.e., SL). The SQ/CC and/or DO are responsible for the management and direction of tactical level BMC2 to include air defense and airspace control activities within the CRC battle management area. The authority to execute operational control and/or tactical control of assigned weapons systems may be decentralized to the CRC by the AOC Chief of Combat Operations. In addition to the commander ensuring the effective BMC2 of the forces assigned, the commander will execute the duties of SQ/CC in accordance with AFI 1-2, *Commander's Responsibilities*. **(T-3)** In

addition to authorities also delegated to the SQ/CC by the Area Air Defense Commander, the roles and responsibilities of the RADC and/or SADC may also be delegated to the SQ/CC, as guidance found in JP 3-01, *Countering Air and Missile Threats*.

5.2.1.1. The SQ/CC and DO will be active-duty AF or ANG field grade officers awarded the 13B3D AFSC from the Undergraduate ABM course, prior to assuming the duties of SQ/CC or DO. The SQ/CC and DO will qualify as an ABM, certify as an SL, and meet and maintain training and positional requirements outlined in AFMAN 13-1CRCV1. In addition, the SQ/CC and DO will perform prescribed duties as members of the UCC. These requirements are non-waiverable.

5.2.1.2. The SQ/CC and DO may delegate authority to conduct operations to the SL as appropriate. When the SQ/CC or DO is not present in the UCC, all delegated BMC2 execution authorities (e.g., scramble, identification, commit, engagement, airspace control, border crossing, and mission reallocation) automatically transfer to the on-duty SL as appropriate.

5.2.2. Director of Operations (DO) (AFSC 13B3D, (Maj – Lt Col)). The DO will, in support of the SQ/CC, be responsible to ensure operations personnel are trained, equipped, and available to execute the tasks associated with the unit's mission. **(T-3)** The DO will create, manage, and execute a daily activity schedule assigning duties to mission crewmembers regardless of operating location. **(T-3)** The DO is responsible for ensuring personnel are assigned to operational mission crews and trained to a CMR or basic mission capable status in employing the AN/TYQ-23A, in both in-garrison and contingency environments. The DO coordinates with the unit's Chief of Maintenance for the effective employment of the radar, communications, and support systems to ensure effective accomplishment of mission requirements. The DO may be delegated the directive authority by the SQ/CC to support UCC activity in the absence of the SQ/CC.

5.2.3. Region/Sector Air Defense Commander (RADC/SADC). In the role of RADC/SADC as delegated, the CC or his/her delegate (i.e., DO or SL) must be prepared to exercise BMC2 of an assigned regional area or sector for defensive counter air operations and assigned weapon systems, to include friendly fighters and air defense artillery units. **(T-3)** The RADC/SADC will direct the pairings of assets under CRC control for effective threat prosecution with further guidance from AFTTP 3-1.CRC and AFTTP 3-3.CRC. **(T-3)** The RADC/SADC must maintain the necessary situational awareness and communications links up to the AOC's Area Air Defense Commander, CFACC or JFACC, or Joint Force Commander (JFC), down to the tactical units' operation centers, and laterally to other RADC/SADC (if employed). **(T-3)** The SQ/CC, and/or DO and SL must also be prepared to handover the RADC/SADC role if the CRC is degraded in any way that would prevent it from fulfilling the function. **(T-3)** The SL, when delegated the role of RADC/SADC, will know the JFACC's air defense strategy in the performance of the following functions. **(T-3)** The CRC designated RADC/SADC will be responsible for, but not limited to the following:

5.2.3.1. Establish liaison and redundant communication requirements with higher, lateral, and subordinate air defense agencies to integrate all air defense activities to ensure common understanding of air defense control measures, ROE and special instructions, and return to forces and lame duck procedures. **(T-3)**

5.2.3.2. Demonstrate thorough understanding of the area air defense plan and the airspace control plan. **(T-3)**

5.2.3.3. Establish region or sector threat assessment (e.g., enemy air and/or ground order of battle, the electronic order of battle). **(T-3)**

5.2.3.4. Assist the Area Air Defense Commander with identification of critical assets, vital areas, air defense priorities, and the recommended placement of anti-air warfare assets. **(T-3)**

5.2.3.5. Assist with the preparation of the air defense appendix to the operations order. **(T-3)**

5.2.3.6. Coordinate the sensor plan. **(T-3)**

5.2.3.7. Identify airborne early warning requirements to supplement radar coverage. **(T-3)**

5.2.3.8. Recommend to the Area Air Defense Commander air defense control measures (e.g., fighter engagement zones, missile engagement zones, base defense zones, weapons engagement zones, and air defense identification zones). **(T-3)**

5.2.3.9. Establish and disseminate air defense warning conditions based on the degree of the threat of probability of air attack (e.g., white, yellow, and red). **(T-3)**

5.2.3.10. Establish and/or disseminate weapons control status (e.g., hold tight, and free), allow the freedom of friendly forces to engage air threats. **(T-3)**

5.2.3.11. Establish fire control procedures to standardize tactical firing instructions. Maintain oversight of anti-air warfare assets (e.g., numbers of assets, types, locations, and status). **(T-3)**

5.2.3.12. Establish operating procedures for initial identification and assignment (when delegated) of airborne targets to fighters and air defense artillery. **(T-3)**

5.2.3.13. Maintain continuous coordination with the ADAFCO and/or ADAFCA to eliminate duplication of engagement efforts and to ensure adequate commitment of assigned weapons against threats. **(T-3)**

5.2.3.14. Establish BMC2 procedures for operations in contested and/or highly contested environments. **(T-3)**

5.2.4. Communications Focal Point (CFP) Section. The CFP, referenced in AFI 17-201, *Command and Control (C2) for Cyberspace Operations*, and Technical Order 00-33A-1001, *Cyberspace Operations and Maintenance Practices*, are a consolidation of all help and/or service desks found in the CRC. The CFP section services include, but is not limited to maintenance control, telephone administration desk, traditional network help desk, and personal wireless communications systems help desk. The CFP will be responsible for, but not limited to, the following duties and responsibilities:

5.2.4.1. Collect data from required sources such as unit work centers for in-garrison operations, the deployed radar and/or detachment UCC, depot, Air Force network operations, Defense Information Systems Agency, and other like agencies. **(T-3)** Collection of data facilitates the assembly, collation, and assessment of logistics information and sustainment requirements.

- 5.2.4.2. Monitor and coordinate production and execution of scheduled and unscheduled equipment maintenance actions while maintaining visibility of equipment and/or systems metrics and indicators. **(T-3)**
- 5.2.4.3. Provide direct support of the unit's operational mission, to include support of voice and data network systems (e.g., routers, switches, servers, key systems, and desktop systems), radio systems, video, and all other communications equipment systems, while maintaining visibility of performance indicators. **(T-3)**
- 5.2.4.4. Monitor the maintenance production effort to meet mission requirements by coordinating with applicable work centers. **(T-3)**
- 5.2.4.5. Coordinate with the operations, and work centers to establish priorities for competing resources and/or limited in availability (e.g., manpower, parts, time, tools, facilities, and equipment). **(T-3)**
- 5.2.4.6. Ensure the exchange of information between work centers and the CFP must be in sufficient detail to allow the CFP to comply with reporting requirements and to identify potential problems. **(T-3)**
- 5.2.4.7. Manage and maintain the unit's primary support equipment, and communications and/or data systems, power, sensor equipment, and the engineering net. **(T-3)**
- 5.2.4.8. Ensure the configuration of unit communications are in accordance with theater operations order, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3320.03D, *Joint Communications Electronic Operating Instructions*, and/or the *CRC Communications Plan Template*, AFTTP 3-1.CRC, AFTTP 3-3.CRC, and the *CRC Concept of Employment*, or other applicable theater communications directives or guidance. **(T-3)**
- 5.2.4.9. Inform CC and Site Support (SS) section of all support equipment and communications and/or data system activities, equipment operational status, and any condition that may disrupt the orderly and controlled execution of the unit's mission. **(T-3)**
- 5.2.4.10. Communicate systems operational status, production efforts, maintenance schedules, problem resolution to include impact to operations of loss of mission support equipment, and identification of COAs to maintain operations to both higher and lower echelons. **(T-3)**

Chapter 6

MISSION CREW PROCEDURES

6.1. Mission Crew Overview. The CRC total mission crewmember composition (i.e., BMT and/or SOT), and its effective employment is fundamental in providing BMC2, battle awareness, surveillance, identification, classification and tracking of all airborne tracks. In addition, the defense of friendly assets, prosecution with assigned weapons of designated targets entering its area of responsibility and/or battle management area, and direct coordination with other BMC2 elements is also imperative. **Table 6.1** depicts the notional manning for the CRC TOC and **Table 6.2** depicts the duty location and number of EPT personnel required. BMT and/or SOT teams are organized under the SL and manned to meet tasked operational missions. **Table 6.3**, depicts BMT and SOT standard manning and organization of the teams, but is always determined by the mission tasking and directed by the SL.

Table 6.1. Control and Reporting Center (CRC) Tactical Operations Center (TOC) Manning.

Duty Position	Personnel
Section Lead (SL) ^{1/3}	2
Air Battle Manager (ABM)	As Required
Air Surveillance Technician (AST) or Senior System Operator (SSO) or Mission System Operator (MSO)	1
Weapons Director (WD)	6
Interface Control Technician (ICT) or MSO	2
Surveillance Technician (ST) or MSO	4
Air Defense Artillery Fire Control Officer and/or Assistant (ADAFCO and/or ADAFCA) ²	1
Regional and/or Sector Air Defense Commander (RADC and/or SADC) ³	1
<p>Notes:</p> <ol style="list-style-type: none"> 1. When two SLs are required for mission execution, a third SL may be assigned to the mission crew. 2. ADAFCO and/or ADAFCA augments the mission crew when required and are not included in total manning. 3. RADC/SADC function will normally be resident in the TOC if the SL is so designated. 	

Table 6.2. Control and Reporting Center (CRC) Electronic Protection Technician (EPT) Manning.

Duty Location	Personnel
CRC Main – Operating Location	4
Deployed radar (DR) (per each DR location)	4

Table 6.3. Control Reporting Center (CRC) Battle Management Team (BMT) and Sensor Operations Teams (SOT).

Battle Management Team (BMT)*	Sensor Operations Team (SOT)
SL	AST or SSO or MSO
WD and/or ABM	ICT or MSO
ST or MSO	EPT
	ST or MSO
*Teams will be tailored based on the theater of employment, type and phase of contingency, and mission requirements. Manning may be adjusted based on tasking (e.g., all crew positions listed may not be required for a BMT); manning may vary.	

6.2. Common Mission Crewmember Responsibilities. The SL, ABM, and WD share common duty responsibilities and tasks in addition to the position-specific responsibilities outlined in the appropriate sections of this manual. Situations may develop that tasks will be disbursed and/or shared between the SL, ABM, and WD. These include, but are not limited to the following:

6.2.1. Ensure mission crew teams (e.g., BMT and SOT) have been provided all necessary mission relevant resources from the MPC extracted from planning documents and directives required to plan and execute the tasked mission as prescribed in AFTTP 3-1.IPE and AFTTP 3-3.IPE. **(T-3)**

6.2.2. If MPC is not activated, mission crew members will extract all necessary data from documents and directives to include threat data required to plan and execute the tasked mission. **(T-3)** Process objectives should determine commander's intent, mission tasking, special instructions, ROE, chain of command, and battle plans from MPC mission planning documents.

6.2.3. Ensure adaptations, changes, and essential information to the database have been received to include data link configurations are loaded to meet mission tasking. **(T-3)**

6.2.4. Read, initialize, and ensure mission crewmembers have read and initialed all items in the flight crew information file and read files. **(T-3)**

6.2.5. Plan, supervise, and participate in mission crew and/or individual team (i.e., BMT and/or SOT) briefing and/or debriefing event(s), determine mission accomplishments relative to briefed mission objectives, including lessons learned. **(T-3)** As applicable, forward lessons learned to MPC chief, or applicable authority in a training environment, and direct the submission of AF Form 4145 at the end of the shift, with guidance from AFMAN 11-214; AFTTP 3-3.CRC, and local and/or theater directives. **(T-3)**

6.2.6. The crew lead will provide constructive feedback on team and individual performance. **(T-3)** They will cite specific positive events and instructional fixes to correct errors. **(T-3)**

The crew lead will summarize mission execution, identify lessons learned, and provide documentation of compared mission results with mission crew objectives. **(T-3)**

6.2.7. Interpret, initiate, and update data for OWS displays to optimize situational awareness. Accomplish switch actions and take appropriate action for alarms and alerts.

6.2.8. Ensure operations, communications, and sensor equipment are available and operate within tolerance specifications to meet mission requirements. **(T-3)** Ensure, through risk management, the sensor and communications plan include course of action(s) for loss of OWS(s), degraded sensors or lost communications due to jamming, loss of radios, equipment failure, etc. **(T-3)**

6.2.9. Ensure communications are configured (e.g., correct frequency bands, cryptographic keys), for both internal and external coordination and are loaded to meet mission requirements at all levels for effective BMC2 execution (e.g., control, air defense command and control net, C2 coordination, Air Force air request net, joint air request net, and engagement control net). **(T-3)** When in supervisory role, coordinate with the UCC and mission crew to ensure equipment and assets are available and properly configured and employed to accomplish the assigned mission.

6.2.10. Ensure operational checks will be completed on all mission and support equipment before the mission event. **(T-3)** Interpret, initiate, and update data for operator OWS display and communications interface panel and complete required and/or frequency checks. Use situation displays and switch actions to optimize situation display.

6.2.11. Ensure the positional changeover briefing to individual crewmember(s) and/or teams on the current operational situation will be conducted prior to departing position referenced in the CRC crew aid. **(T-3)**

6.2.12. The crew lead will plan for and will perform and/or supervise mission crew emergency actions and response procedures through crew aid checklists (e.g., emission control, electronic attack, and/or electronic protection, fire, alarm conditions, mission-oriented protective posture level changes, ground attacks, and anti-radiation missile attack). **(T-3)**

6.2.13. Plan for and will take appropriate action to perform and/or supervise mission crew actions during quick reaction situations (e.g., emergency conditions, air defense warning, and force protection conditions) in accordance with UCC checklists and report status to appropriate authority as necessary. **(T-3)**

6.2.14. Ensure proper voice authentication procedures will be employed, when applicable. **(T-3)**

6.2.15. Use and control classified materials in established security procedures, employ information assurance (e.g., operational security procedures), as required by regulations and situation. **(T-3)** Authenticate orders and voice transmissions as required. **(T-3)**

6.2.16. Safety factors will be complied with for safe operation and mission accomplishment. Appropriate safety checks will be accomplished and coordinated as needed. **(T-3)** Electrical, fire, physical and radiation hazards will be annotated and immediately reported **(T-3)** All crewmembers will know the location of safety equipment and explain the proper use. **(T-3)**

6.2.17. Upon recognition of the existence of an aircraft emergency (e.g., in-flight bailout, or crash), the crewmember will notify the appropriate internal sections, external agencies, and

will initiate and supervise the completion of the appropriate steps annotated in the crew aid checklist, *Aircraft Emergency*. **(T-3)**

6.2.18. Plan for and will take appropriate action to perform and/or supervise the air battle, ensure information flow with appropriate command authorities, direct tactical action with direction from theater ROE within the team or cross-teams (i.e., SOT). **(T-3)**

6.2.19. Appropriate internal nets, frequencies and chat windows will be utilized as required to maintain effective situational awareness to include utilization of appropriate operational brevity terms and code words, proper receive and/or transmit techniques, and communications discipline. **(T-3)** All procedure guidance is within AFTTP 3-1.CRC; AFTTP 3-3.IPE; AFTTP 3-2.5; *Multi-Service Brevity Codes*; Allied Communications Publication (ACP)-121(I), *Communications Instructions - General*; ACP 125(G), *Communication Instructions – Radiotelephone Procedures*; AFTTP 3-2.77; *Tactical Chat in Support of Operations*; AFTTP 3-2.8; *Air Control Communication*; AFMAN 11-214, and the CRC-CUI *Concept of Employment*. **(T-3)**

6.2.20. Coordination will be accomplished with all responsible sections to ensure mission support equipment and assets are available to accomplish the assigned event and/or mission. **(T-3)**

6.2.21. Coordinate will be completed with higher, lateral, and subordinate battle management command and control (BMC2) agencies prior to the conduct of operations in accordance with ROE, special instructions, and ATO, (e.g., functions for SQ/CC, Senior Air Defense Officer, and/or Defensive Duty Officer), monitor required communications nets (e.g., air defense command and control net and/or engagement control net). **(T-3)**

6.2.22. Demonstration of strict professional mission crew discipline will be conducted throughout all phases of the mission. **(T-3)**

6.2.23. Mission crew and external agencies will be notified of electromagnetic interference and/or electronic attack. **(T-3)**

6.2.24. Coordinate with the mission crew for emission control and electronic protection activities to counter electronic attack. **(T-3)**

6.2.25. Direct data link employment and required modifications to maintain the CRC common tactical picture. **(T-3)** Monitor the AST for the clarity, accuracy, currency, and quality of track data displayed for the common tactical picture on the mission system and for forwarding that data to the theater-wide common operational picture. **(T-3)**

6.2.26. Report data link issues through established procedures. **(T-3)** Supervise the use of the data link coordination network and track supervision net as required. **(T-3)** Implement data link filters as required. **(T-3)** Send, interpret, and respond to data link messages in a timely manner. **(T-3)**

6.2.27. Monitor the applicable systems status monitoring tools or take direction from the Region or Sector Interface Control Officer for system degradation. **(T-3)**

6.2.28. Ensure the CRC maintains an accurate recognizable air picture. Recognize air picture and/or symbology deviations and direct and/or take corrective action. **(T-3)**

6.2.29. Ensure database ATO information is correct and current. **(T-3)**

- 6.2.30. Manage the database, system configuration, and coordinate system resets to meet mission needs. **(T-3)**
- 6.2.31. Recommend system configuration changes to the mission crew as appropriate. **(T-3)**
- 6.2.32. Configure system and database as required and coordinate computer problems and workarounds as required. **(T-3)** Respond to alarms and alerts in a timely manner.
- 6.2.33. Ensure sensors are configured and optimized using the PREP at [Attachment 2](#). **(T-3)**
- 6.2.34. Recognize and analyze degraded sensor performance. **(T-3)**
- 6.2.35. Ensure corrective measures are taken to improve degraded sensor performance. Monitor corrective actions taken to improve degraded sensors. **(T-3)**
- 6.2.36. Ensure remote radar data is correlated and data was received on all tracks within the battle management area or track production area. **(T-3)**
- 6.2.37. Comply with airspace management requirements and restrictions in accordance with theater airspace control measures and airspace control plan and/or airspace control order procedures. Initiate airspace requests and verify airspace restrictions and limitations when required. **(T-3)** Ensure all efforts are made to keep controlled aircraft inside the lateral and vertical confines of the airspace in a timely manner. **(T-3)**
- 6.2.38. Ensure strict adherence to dynamic airspace control measures, restricted operating zones, high density air control zones, missile engagement zones, and joint engagement zones, when designated in enroute to or in assigned the battle management area. **(T-3)**
- 6.2.39. Ensure a handover briefing is conducted for all on-coming and/or off-going BMC2 platforms (e.g., E-3 and/or E-2 platforms), and the receipt and/or transfer of controlled resources prior to declaring “on-station” and/or “off-station.” **(T-3)** Brief in accordance with theater directives, special instructions, and LOPs. **(T-3)**
- 6.2.40. Locate and maintain tracking of mission aircraft using reported position, radar and/or IFF/SIF, positive position locating information, directed pilot maneuvering and/or external sources. **(T-3)** Provide aircrews with a working frequency and/or net and time of day hack when applicable. **(T-3)** Provide a brief situation update and provide requested and/or required information with guidance from AFTTP 3-3.CRC. **(T-3)** Conduct IFF/SIF checks and advise aircrew of status. **(T-3)**
- 6.2.41. Supervise and/or control assigned aircraft using all tracking and identification means available (e.g., IFF/SIF, positive position locating information, point out) consistent with the continuum of control and the tasked mission referenced in AFMAN 11-214; AFTTP 3-1.IPE and AFTTP 3-3.IPE, consistent with the briefed mission, ROE, operations directives, and aircraft capabilities. **(T-3)**
- 6.2.42. Commit weapons resources to counter the threat in accordance with theater ROE. **(T-3)** Coordinate and/or establish combat air patrol mission and hand-over and/or recovery points as required. **(T-3)** Supervise and/or manage air refueling assets and the fuel requirements of controlled assets. **(T-3)** Detect, identify, report and track air traffic within the assigned area. **(T-3)**
- 6.2.43. Coordinate airborne orders and scramble and/or divert alert aircraft when directed or delegated. **(T-3)** Coordinate with the ST/MSO for detection, initiation, identification, and

maintenance for tracks within the battle management area. (T-3) Coordinate Lane crossers and/or leakers to either the SL or the next lane's Weapons Director (WD), or external controlling agency as required. (T-3) Forward battle damage assessment and/or in-flight report from the inflight mission commander to the SL. (T-3)

6.2.44. Ensure 100% force accountability of assigned assets, report deviations to appropriate agencies. (T-3)

6.2.45. Recognize and/or receive an impending anti-radiation missile attack profile warning and supervise the section's response. (T-3)

6.2.46. Coordinate and manage the air battle with appropriate command authorities and direct tactical action in accordance with theater ROE and special instructions. (T-3)

6.2.47. Supervise allocation of resources to counter the threat and accomplish mission objectives. (T-3)

6.2.48. Direct and/or supervise guidance to the BMT and/or SOT on executing allocation and employment of resources (e.g., aircraft and/or air defense artillery), in accordance with the joint air operations plan, operations plan, ATO, and/or airspace control order, airspace control plan, operational tasking data link, ROE, special instructions, and other mission specific documents, procedures and taskings. (T-3) Obtain current equipment status and determine impact on operational mission. (T-3)

6.2.49. Support the on-scene commander (e.g., wingman, rescue mission commander, airborne mission commander), for combat search and rescue and/or personnel recovery operations with the following: airspace coordination and/or deconfliction, force accountability, threat awareness, tanker anchor control, and air support requests in accordance with special instructions and crew aid checklist, *Airborne Mission Commander* and in accordance with AFTTP 3-3.CRC. (T-3)

6.2.50. Direct and/or supervise section functions by prioritizing tasks and available resources to ensure accomplishment of mission objectives. (T-3) Allocate and/or manage radio assignments aligned with mission priority(s). (T-3)

6.2.51. Direct and/or supervise the distribution of threat information to the UCC, mission crew, and external battle management command and control (BMC2) elements as required. (T-3)

6.3. SL, ABM, WD, and ADAFCO ADAFCA Specific Responsibilities. In addition to the common ABM and SL roles and responsibilities in [paragraph 6.2](#), individual mission crewmember core responsibilities are listed, but are not limited to the following:

6.3.1. Section Lead (SL) (AFSC 13B3D). The SL will be responsible to the Commander and/or DO for the overall readiness and supervision of the mission crew for area of responsibility and/or battle management area or for a functional tasking. (T-3) The SL will manage coordination with the AOC. (T-3) The CRC (i.e., CC and/or DO and SL), may also request or be delegated additional roles, responsibilities, and authorities (e.g., scramble, identification, commit, engagement, airspace control, border crossing, and mission reallocation). Responsibilities may also include the functions of RADC/SADC designated by the Area Air Defense Commander. The SL is the final authority for all mission decisions, except as retained by the CC. The SL will be responsible for, but not limited to:

6.3.1.1. Ensure proper mission crewmember composition and crewmembers meet established unit Go/No-Go criteria and are in accordance with AFMAN 13-1GBMC2 V2. **(T-3)**

6.3.1.2. Recognize and/or receive an impending anti-radiation missile attack profile warning, the SL will immediately notify the mission crew, the UCC, and any external agencies as briefed. **(T-3)**

6.3.1.3. Supervise and execute the assigned mission in a timely, efficient manner with the designated mission crew. **(T-3)**

6.3.1.4. Assess and implement theater ROE, special instructions, and identification matrix procedures based on changing alert conditions. **(T-3)**

6.3.1.5. Authorize and supervise the declaration of targets in accordance with theater ROE, special instructions, and identification matrix. **(T-3)** Ensure engagement tactics are commensurate with ROE, combat identification, and threat assessment. **(T-3)** Re-assess ROE and identification procedures based on changing alert conditions. **(T-3)**

6.3.1.6. Direct the commit of weapons resources (e.g., aircraft and/or air defense artillery) to counter the threat in accordance with theater ROE and designated command authorities (e.g., scramble, identification, commit, engagement, airspace control, border crossing, and mission reallocation). **(T-3)**

6.3.1.7. Integrate and monitor air defense artillery status and direct appropriate air defense artillery weapons alert status through the ADAFCO and/or ADAFCA and disseminate air defense warnings as required. **(T-3)**

6.3.1.8. Supervise, monitor, support, and direct the airborne mission commander during combat search and rescue and/or personnel recovery efforts as tasked. **(T-3)** Provide as a minimum, the following: airspace coordination and/or deconfliction, force accountability, threat awareness, tanker anchor control, and air support requests in accordance with special instructions, the crew aid checklist, and in AFTTP 3-3.CRC. **(T-3)**

6.3.1.9. Direct mission crew functions by prioritizing tasks and available resources to ensure accomplishment of mission objectives. **(T-3)** Allocate and manage radio assignments aligned with mission priority and radio availability. **(T-3)**

6.3.1.10. Monitor current and projected equipment status and determine impact and risk on operational mission for any degraded equipment and systems. **(T-3)** Ensure risk mitigation has been determined against mission tasking. **(T-3)**

6.3.1.11. Approve or disapprove continued operations of malfunctioning equipment or direct and/or approve scheduled and unscheduled maintenance on equipment that could potentially affect the mission. **(T-3)** SL will forward status and/or requests for maintenance support from the maintenance operations center. **(T-3)**

6.3.1.12. Ensure coordination and information flow within the MPC, TOC, UCC, and external BMC2 elements. **(T-3)** Provide BMC2 assets (e.g., E-3C/G Airborne Warning and Control System) an on- and/or off-station briefing as prescribed in unit and theater standard operating procedures. **(T-3)**

6.3.1.13. Coordinate with external agencies for identification of aircraft not normally identifiable by the standard identification matrix. **(T-3)** Coordinate for declaration of hostiles based on ROE, special instructions, and the identification matrix when identification authority rests outside the CRC. **(T-3)** Direct the mission crew through degraded operations levels during changing alert conditions. **(T-3)**

6.3.1.14. Direct and/or assist the ABM and/or WD with target pairings. **(T-3)** Ensure engagement tactics are commensurate with threat assessment, ROE and/or special instructions, and established identification matrix. **(T-3)** Assist ABMs and WDs in managing assigned close air support resources and efforts. **(T-3)**

6.3.1.15. Manage in concert with the AST/SSO and/or ST/MSO, the detection, tracking, classification, and identification of air traffic within, entering, or exiting the CRC's area of responsibility, battle management area, and/or track production area and the disseminate of the CRC's recognizable air picture through TDLs to the common tactical picture. **(T-3)**

6.3.1.16. Coordinate within operations and the BMT(s) for emission control and electronic protection activities and ensure the CC and/or DO, AST/SSO and/or MSO, and external agencies are notified of electromagnetic interference and/or electronic attack experienced. **(T-3)**

6.3.2. Air Battle Manager (ABM) (AFSC 13B3D). The ABM will be responsible to the SL for mission execution of assigned tasking. **(T-3)** ABMs will be assigned to BMT s (i.e., Team 1 or 2) as required. **(T-3)** An ABM will prioritize assigned resources and capabilities to integrate and focus efforts aligned with the commander's intent across both complex, evolving theater operations, and training environments. **(T-3)** The ABM will direct resources to meet taskings across the full range of military operations while mitigating degrading factors. **(T-3)**

6.3.2.1. Direct and/or assist the SL with weapons and/or target pairings. **(T-3)** Ensure engagement tactics are commensurate with threat assessment, ROE, special instructions, and established identification matrix. **(T-3)** Assist the SL in the management of CRC assigned close air support resources and mission. **(T-3)** Monitor the detection, tracking, and identification of air traffic within the CRC's area of responsibility, battle management area, or track production area. **(T-3)**

6.3.2.2. Ensure 100% accountability, and report status and deviations of assigned resources (e.g., fuel, armament, and battle damage assessment) to the SL as appropriate. **(T-3)**

6.3.2.3. Evaluate the air defense threat situation and make recommendations to the CC, DO, and SL who may also be the delegated RADC/SADC for countering the air threat. **(T-3)**

6.3.2.4. When approved by the DO, qualified ABMs may also lead a small team of WDs and STs/MSOs for in-garrison training events in lieu of having an SL on position. The activity will not include simultaneous or large force exercise activity. **(T-3)** The ABM will be responsible for, but not limited to the following responsibilities:

6.3.2.4.1. When so tasked, the ABM will direct and/or supervise the BMT functions to ensure accomplishment of mission objectives. **(T-3)** Prioritize tasks and available resources to manage section crew member workload. **(T-3)** Provide updated pertinent

information (e.g., change(s) to briefed plan, weather, equipment status) to the BMT as required. **(T-3)** Coordinate with external agencies that may impact the event (e.g., Federal Aviation Administration, wing operations center). **(T-3)**

6.3.2.4.2. When delegated, supervise the small team's mission support functions (e.g., radios, sensors, airspace), to achieve mission accomplishment. **(T-3)** Ensure the BMT controls the assigned missions to the level requested and follows the continuum of control to the maximum extent possible. **(T-3)**

6.3.2.4.3. When delegated to lead a small team, the ABM will ensure proper mission crewmember composition and crewmembers meet established unit Go/No-Go criteria and are in accordance with AFMAN 13-1GBMC2V2. **(T-3)**

6.3.3. Weapons Director (WD), AFSC 1C551D, Minimum 5 Level, SEI 948, Advanced Instructor Weapons Director Course Graduates – SEI 904). WDs will be assigned to BMTs (i.e., team 1 or 2) as required. **(T-3)** The WD will be responsible to the SL for mission execution of assigned tasking. **(T-3)** The WD in performance of tasked mission is responsible for, but not limited to the following:

6.3.3.1. Attend mission pre- and/or post-mission briefs with tasked aircrews if time and location permits. **(T-3)** Extract information from mission planning documents required to plan and execute the tasked mission in accordance with regulations and/or documents, and appropriate operations directives. **(T-3)** Extract ROE and/or SPIN information and assist in mission planning as applicable. **(T-3)** Participate in and extract pertinent information from the aircrew pre-mission briefing as applicable. **(T-3)**

6.3.3.2. Accomplish mission objectives as briefed, and consistent with ROE, special instructions, operations directives, aircraft capabilities, and the operational environment. **(T-0)**

6.3.3.3. Identify and inform controlled aircraft of all threat information, (i.e., factor groups) through "picture" and direct threat calls in accordance with receive and/or transmit procedures found in AFMAN 11-214 and AFTTP 3-3.CRC. **(T-3)**

6.3.3.4. Recognize the existence and assist an aircraft emergency in accordance with crew aid checklist *Controlled Aircraft Emergency*. **(T-3)**

6.3.3.5. Authenticate voice transmissions with aircraft under control or coordinate with agencies within specified authenticator time limits. **(T-3)**

6.3.3.6. Comply with appropriate safety factors and checks required for safe operation and mission accomplishment for aircraft under control. **(T-3)**

6.3.3.7. Ensure coordination and information flow within the BMT and cross-teams (i.e., SOT) as required. **(T-3)**

6.3.3.8. Recognize and understand the effects of emission control procedures on airborne resources under control. **(T-3)** Coordinate with the mission crew for emission control and electronic protection activities. **(T-3)** Ensure the mission crew and external agencies are notified of electromagnetic interference and/or electronic attack. **(T-3)**

6.3.3.9. Aid combat search and rescue and/or personnel recovery assets as required. Provide as a minimum the following: airspace coordination and/or deconfliction, force

accountability, threat awareness, air refueling brief, and air support requests in accordance with ROE, special instructions, and the crew aid checklist *Airborne Mission Commander* in accordance with AFTTP 3-3.CRC. **(T-0)**

6.3.3.10. Ensure all fires requests are coordinated and de-conflicted. **(T-3)**

6.3.3.11. Comply with time, vertical and lateral airspace management requirements, and restrictions in accordance with standard operating procedures and/or theater procedures. **(T-3)** Initiate airspace requests, verified airspace restrictions, and limitations in accordance with applicable directives. **(T-3)**

6.3.3.12. Locate mission aircraft using reported position, IFF/SIF, positive position locating information, directed pilot maneuvering and/or external sources in a timely manner. **(T-3)** Ensure 100% ATO force accountability of assigned assets, report deviations to SL as appropriate. **(T-3)** Pass or confirm altimeter in accordance with local or theater procedures. Provide the aircrew with a working frequency and net and time of day when applicable **(T-3)** Provide the aircrew situation updates. **(T-3)** Conduct IFF/SIF checks and advise the aircrew of status. **(T-3)** Conduct radar handoffs of aircraft in accordance with briefed procedures. **(T-3)**

6.3.3.13. Provide minimum risk safe passage and flight join up assistance as required and/or requested. **(T-3)**

6.3.3.14. Obtain and disseminate post-refueling offload information as required. **(T-3)**

6.3.3.15. Obtain and disseminate post-mission battle damage assessment information as required. **(T-3)**

6.3.3.16. Ensure 100% accountability, and report status and deviations of assigned resources (e.g., fuel, armament, and battle damage assessment) to the MC as appropriate. **(T-3)**

6.3.4. Air Defense Artillery Fire Control Officer and/or Assistant (ADAFCO and/or ADAFCA). As prescribed in U.S. Army techniques publication (ATP) 3-01.7, *Air Defense Artillery Brigade Techniques*, the ADAFCO team will be responsible to the MC and/or SL as appropriate. **(T-3)** The ADAFCO or ADAFCA will coordinate the engagement of air defense artillery units for the defense of designated facilities and/or areas as listed on the JFACC's defended asset list. **(T-3)** The ADAFCO is the single point of contact between land-based U.S. Army air and missile defense fire direction centers, and and/or information coordination central, and the controlling authority (e.g., CRC). **(T-3)** The MC and ADAFCO per AFTTP3-3.CRC will coordinate and execute in accordance with established theater ROE, fire control de-confliction procedures, and weapons control procedures in determining specific air defense artillery engagements. **(T-3)** The ADAFCO and/or ADAFCA team, when employed, will be responsible for, but not limited to:

6.3.4.1. Inform the MC and SL as required of the status and capabilities of the assigned air defense artillery systems. **(T-3)**

6.3.4.2. Ensure the information coordination central holds the appropriate authorities to support the kill chain (e.g., identification matrix execution, hostile declaration, engagement), and the SL is informed of delegated authorities held at the information coordination central. **(T-3)**

6.3.4.3. When directed by the MC, the ADAFCO and/or ADAFCA will transmit appropriate weapons commands to the fire direction center and/or information coordination central to ensure effective employment of air defense artillery resources. **(T-3)** Coordinate directly with the information coordination central for target assignment. **(T-3)** Conduct close coordination with the SL on all targets in pre-briefed engagement zones. **(T-3)**

6.3.4.4. Monitor air defense artillery engagements of air-breathing threats and theater ballistic missiles, and immediately inform the MC and SL of results of weapons engagement to include the number of targets engaged and/or number of targets remaining. **(T-3)**

6.3.4.5. Receive and update all brigade and/or battalion level reports (i.e., surface to air missile status report, engagement summary reports), further guidance found in Field Manual (FM) 6-99, *U.S. Army Report and Message Formats*. **(T-3)**

6.3.4.6. Coordinate with the SL for pending and/or recommend changes in weapons control states and with the ST/MSO and WDs on all unidentified tracks and recommend identification status as received from air defense artillery sources. **(T-3)**

6.4. AST/SSO, EPT, ICT, and ST, MSO Specific Responsibilities.

6.4.1. AST/SSO and ST/MSO (AFSC 1C5), Common Mission Crew Responsibilities. The AST/SSO and ST/MSO mission crewmembers share common duty responsibilities and tasks in addition to position-specific responsibilities outlined in their respective sections of this manual. Specific responsibilities include but are not limited to the following:

6.4.1.1. Ensure extraction of all necessary data from documents and directives to plan sensor, surveillance and TDL operations to meet the commander's intent and mission tasking. **(T-3)** Confirm the chain of command, authorities, and battle plans. Attend and/or present team mission briefs when appropriate. **(T-3)**

6.4.1.2. Provide guidance to the mission crew on employment of resources, in accordance with the joint air operations plan, operations plan, ATO, airspace control order, operational tasking data link, ROE, special instructions and other mission specific documents, procedures and taskings. **(T-3)** Capture lessons learned. **(T-3)**

6.4.1.3. Ensure operational checks are completed on all equipment and all equipment outages are reported before the mission. **(T-3)** Ensure the required radios were available, configured, frequencies assigned, and cryptographic equipment loaded and configured **(T-3)** Configure and operate the OWS display to optimize situational awareness in accordance with unit LOP. **(T-3)** The AST/SSO/MSO directs database loads and approved changes to database information. **(T-3)**

6.4.1.4. Interpret, initiate, and update data for computer displays. Accomplish OWS switch actions and respond to alarms and alerts. **(T-3)** Perform surveillance-related console operations and switch actions to maintain an accurate air picture. **(T-3)**

6.4.1.5. Brief the on-coming ADAFCO and/or ADAFCA on the current operational situation before departing position. **(T-3)** Conduct positional changeover briefing with crew aid checklist, *Positional Change-Over Briefing*. **(T-3)**

6.4.1.6. Conduct emergency action procedures as required and/or tasked and coordinate with other mission crewmembers without delay. **(T-3)**

6.4.1.7. Authenticate voice transmission within time limits specified in accordance with authenticators. **(T-3)**

6.4.1.8. Comply with all safety factors required for safe operation and mission accomplishment. Ensure appropriate safety checks were accomplished as needed. **(T-3)** Ensure adequate coordination to prevent unsafe acts. Electrical, fire, physical and radiation hazards will be annotated and immediately reported. **(T-3)** All crewmembers will know the location of safety equipment and explain the proper use. **(T-3)**

6.4.1.9. Recognize the existence of and assist the mission crew in the conduct of aircraft emergencies. **(T-3)** Coordinate responses referencing the mission crew aid, *Controlled Aircraft Emergency* and enter the appropriate emergency point on the OWS. **(T-3)**

6.4.1.10. Coordinate with the mission crew to ensure equipment and assets are available to accomplish the assigned mission. **(T-3)** Ensure coordination and information flow within the SOT and cross-teams (i.e., BMTs) as required. **(T-3)**

6.4.1.11. Utilize and monitor appropriate assigned frequencies and chat windows (if available) as required to maintain effective situational awareness. (e.g., interface control net, and data link coordination network and/or track supervision net). **(T-3)**

6.4.1.12. Demonstration of strict professional mission crew discipline will be conducted throughout all phases of the mission. **(T-3)**

6.4.1.13. Employ receive and/or transmit procedures in accordance with AFTTP 3-3.CRC. **(T-3)**

6.4.1.14. Monitor the applicable systems analysis and monitor status tools or take direction from the Region or Sector Interface Control Officer for system degradation. **(T-3)**

6.4.2. AST/SSO/MSO, AFSC 1C5, Minimum 7 level, SEI 946. The AST/SSO/MSO as the lead for the SOT will be responsible to the SL for management of the wide area and long-range surveillance and TDL functions and the supervision of assigned EPT, ICT, STs, and MSOs. **(T-3)** The AST/SSO/MSO will be responsible for the clarity, accuracy, currency, and quality of track data displayed for the common tactical picture on the mission system and to provide that data to the theater-wide common operational picture. **(T-3)** The AST/SSO/MSO will ensure, as referenced in JP3-01, *Countering Air and Missile Threats*, an accurate common tactical picture (i.e., the picture is distributed over the TDL network architecture or provide required voice tell as required). **(T-3)** The AST/SSO/MSO should be afforded every opportunity to attend formal Joint TDL courses. The AST/SSO/MSO will be responsible for, but not limited to:

6.4.2.1. Ensure SOT functional crewmember composition and crewmembers meet established unit Go/No-Go criteria and are in accordance with AFMAN 13-1GBMC2V2. **(T-3)** Lead the SOT mission planning efforts to determine the mission tasking priorities for: identification criteria, area(s) of responsibility, battle management area(s), track production area(s), TDL requirements, communications requirements, and surveillance and/or TDL plans from mission planning documents. **(T-3)** The AST/SSO/MSO will obtain equipment status from the CFP. Read and initial all items in the flight crew information file and read files. **(T-3)** Establish a course of action based on risk assessment

and mission impact in event of loss of communications (e.g., equipment failure, jamming). **(T-3)**

6.4.2.2. Coordinate with the EPT to direct emission control and electronic protection activities and ensure the mission crew and external agencies are notified of electromagnetic interference and/or electronic attack experienced. **(T-3)**

6.4.2.3. Recognize and/or receive impending anti-radiation missile attack profile warning, notify the mission crew, and supervise SOT and TDL team responses to an impending anti-radiation missile attack. **(T-3)**

6.4.2.4. Provide timely, efficient guidance to the SOT on employment of resources in accordance with the joint air operations plan, operations plan, ATO and/or airspace control order, operational tasking data link, special instructions and other mission specific documents, procedures and taskings. **(T-3)** Assess ROE and identification procedures based on changing alert conditions. **(T-3)**

6.4.2.5. Supervise the proper detection, classification, identification, reporting and tracking of air traffic within the area of responsibility and/or battle management area. **(T-3)** When delegated, in accordance with theater identification matrix and ROE, supervise the declaration of targets as hostile based on hostile intent and/or hostile act criteria and level of authority. **(T-3)**

6.4.2.6. Supervise electronic protection efforts to counter electronic attack. **(T-3)** Disseminate air defense warnings as required. **(T-3)** Monitor and support combat search and rescue and/or personnel recovery efforts as tasked. **(T-3)**

6.4.2.7. Ensure flight plan information is disseminated to higher, lateral, and subordinate units. **(T-3)** Approve and/or disapprove all cancel track actions. **(T-3)** Ensure coordination of identification activities with adjacent air traffic control and BMC2 facilities. Direct surveillance configuration at subordinate DR sites. **(T-3)** Ensure data link track filters were built as required. **(T-3)**

6.4.2.8. Ensure coordination and information flow within the TOC as required. **(T-3)** Coordinate and direct track production tasks for assigned area(s) in accordance with ATO, airspace control order, airspace control plan, and special instructions. **(T-3)** Ensure the SOT was aware of airspace control measures involved in the identification process (e.g., enemy airspaces, point of origin criteria, minimum risk routes). **(T-3)**

6.4.2.9. Perform initial data link equipment checkout. **(T-3)** Conduct TDL operations as directed. Build and maintain TDLs as required. **(T-3)** Report link problems in accordance with established procedures. **(T-3)** Use the data link coordination network and/or track supervision net to coordinate with external data link agencies for the designation and use of frequencies and/or channels assigned to interface data links and voice coordination networks. **(T-3)** Implement changes in interface configurations as directed. **(T-3)** Build and implement data link filters as required. **(T-3)** Recommend changes in data link configurations to the SL as appropriate. **(T-3)** Data link operations will be in accordance with AFMAN 13-116. **(T-3)**

6.4.2.10. Divide the CRC operational area into track production area(s) and assigned appropriate STs/MSOs to conduct surveillance within those areas. **(T-3)** Ensure timely

and accurate collection, display, and dissemination of air surveillance data to higher, lateral, and subordinate units as appropriate. **(T-3)** Ensure implementation of the airspace control order and provide safe passage advisories. **(T-3)** Ensure active airspace control measures were properly displayed and coordinate the activation and deactivation of airspace control measures with the mission crew. **(T-3)**

6.4.2.11. Analyze and apprise the SL of the surveillance and TDL situation, to include system(s) status, jammer points (i.e., fixes), and that jam strobes are analyzed and displayed, and coordinated with other BMC2 nodes to identify and locate jammers or the source of interference. **(T-3)**

6.4.2.12. Coordinate voice tell procedures in accordance with AFTTP 3.1.IPE and AFTTP 3-3.IPE, **Attachment 1**, and AFTTP 3-3.CRC, theater special instructions, and CRC mission crew aids enabling the timely and accurate exchange of track information with coordinating BMC2 agencies when TDL is not available between two or more agencies. **(T-3)**

6.4.2.13. Ensure that when in voice tell receive-mode, the ST/MSO will have the pre-briefed and/or pre-coordinated tell formats and be prepared to immediately initiate track data symbology prior to attempting to correlate the told-in track. **(T-3)**

6.4.2.14. Ensure procedures are developed to give priority tracking attention to track(s) of interest and assign tracking responsibilities and record pertinent track data (e.g., event times, track number, identification, and resolution) in the operations logbook. **(T-3)**

6.4.2.15. Initiate, modify, and manage the database as directed to meet operational mission tasking. **(T-3)** Select, copy, delete, review, rename, share and/or create database entries as necessary. **(T-3)** Ensure database entries for the ATO, airspace control order, airspace control plan, and operational tasking data link information is correct. **(T-3)** Recommend system configuration changes to the SL, as appropriate. **(T-3)** Coordinate computer problems and workarounds as required with the SL and the UCC. **(T-3)** Respond to alarms and alerts in a timely manner. **(T-3)**

6.4.2.16. Ensure proper sensor and site registration procedures are implemented as required. **(T-3)** Direct coordination to resolve registration problems with interfacing units. **(T-3)**

6.4.2.17. Ensure sensors are configured and optimized to accomplish the mission. **(T-3)** Recognize and analyze degraded sensor performance. **(T-3)** Ensure and monitor corrective measures taken to improve degraded sensor performance. **(T-3)** Ensure system radar correlation checks for organic and remote radars are completed on the PREP worksheet, specified in T.O. 31P3-2TPS-75-56WC-1, *Scheduled Periodic Inspection Workcard, TPS-75 Radar System*. **(T-3)**

6.4.2.18. Provide surveillance and identification-related data, records, and reports to the SL as directed. **(T-3)**

6.4.3. ICT/MSO, AFSC 1C51, Minimum 5 level, SEI 947. The ICT/MSO will be responsible to the AST/SSO/MSO to establish and maintain TDLs and monitor data link effectiveness. **(T-3)** The ICT/MSO is responsible to troubleshoot mission equipment malfunctions at the direction of the AST. **(T-3)** The ICT/MSO should be afforded every opportunity to attend

formal joint TDL courses. The ICT/MSO will as a minimum be responsible to perform the following:

6.4.3.1. Extract information from mission planning documents as directed by the SL and/or AST/SSO/MSO. Assist in the preparation of information required for the mission crew briefing. **(T-3)** Read and initial all items in the flight crew information file and read files. **(T-3)**

6.4.3.2. Assess and plan for platform multi-TDL capabilities and limitations of the supporting equipment components and systems to include the anticipated data loads, interoperability problems, and environmental limitations. **(T-3)**

6.4.3.3. Coordinate with the MPC and SL, AST/SSO/MSO, and ST/MSO as required to plan, compile, and load the initial build of the TDL, battle management, surveillance, and weapons functions databases to ensure the system configuration meets operational requirements. **(T-3)**

6.4.3.4. Attend all required briefings and/or debriefings and extract and/or provide all necessary information (i.e., unit's track number block, any participating unit (PU), joint tactical information distribution system unit, filter plan) to the SOT. **(T-3)** Conduct the TDL portion of the pre-mission crew briefing in accordance with crew aids to include participants, current equipment, and link status, etc. **(T-3)**

6.4.3.5. Plan all areas necessary to conduct tasked mission(s) and conduct aircrew briefings and/or debriefings in accordance with AFMAN 11-214 and AFTTP 3-3.CRC (as applicable), and other LOPs and/or directives. **(T-3)** Provide constructive feedback on team and individual performance. **(T-3)** Provide specific instructional fixes to correct errors and requested inputs from others. **(T-3)** Summarize mission execution, identified lessons learned, and compare mission results with mission crew objectives. **(T-3)**

6.4.3.6. Coordinate initial TDL configuration with external agencies to ensure accurate multi-link operations (e.g., taskings), aligned with Joint Interface Control Officer and/or AST/SSO/MSO guidance. **(T-3)**

6.4.3.7. Configure TOC operator workstations and joint tactical information distribution system module communications equipment to meet mission requirements. **(T-3)** Ensure operational checks are completed on all necessary equipment (e.g., joint range extension, joint tactical information distribution system terminal) prior to the mission and equipment outages are reported. **(T-3)** Ensure radios are available, frequencies assigned, and cryptographic equipment loaded and configured. **(T-3)** Perform initial data link equipment checkout in accordance with the ATO, special instructions, operational tasking data link or Joint Interface Control Officer, Region or Sector Interface Control Officer, and AST/SSO/MSO, and/or ST/MSO guidance as the mission dictates. **(T-3)** Configure the communications equipment for operations as required. **(T-3)**

6.4.3.8. Set up and operate the OWS and joint tactical information distribution system module in accordance with unit LOPs. **(T-3)** Locate controls and indicators on the joint range extension equipment and/or OWS. Use switch actions to optimize data links and display presentations. **(T-3)**

- 6.4.3.9. Conduct changeover briefings with the on-coming ICT/MSO, guidance found in Chairman of the Joint Chiefs of Staff Manual (CJCSM) 6120.01, *Joint Multi-Tactical Data Link (TDL) Operating Procedures*, and appropriate CRC crew aids. **(T-3)**
- 6.4.3.10. Conduct emergency action procedures as required and/or tasked and coordinate with other crewmembers without delay. **(T-3)**
- 6.4.3.11. Authenticate voice transmission within time limits specified in accordance with authenticators. **(T-3)**
- 6.4.3.12. Comply with all safety factors required for safe operation and mission accomplishment. **(T-2)** Ensure appropriate safety checks were accomplished as required. **(T-2)** Ensure adequate coordination to prevent unsafe acts. **(T-2)** Electrical, fire, physical and radiation hazards will be annotated and immediately reported. **(T-2)** All crewmembers will know the location of safety equipment and explain the proper use. **(T-2)**
- 6.4.3.13. Coordinate with the mission crew to ensure equipment and assets are available and used to accomplish the assigned mission. **(T-3)** Ensure coordination and information flow within the SOT, across the BMT(s), and with external agencies as required. **(T-3)**
- 6.4.3.14. Demonstration of strict professional mission crew discipline will be conducted throughout all phases of the mission.
- 6.4.3.15. Employ receive and/or transmit procedures in accordance with AFTTP 3-3.CRC. **(T-3)**
- 6.4.3.16. Conduct TDL operations as directed: build, modify, and maintain TDL databases and filters as directed. **(T-3)** Interpret, respond, and report TDL problems in accordance with the operational tasking data link and established LOPs and theater procedures. **(T-3)** Use data link coordination network and/or track supervision net to coordinate frequencies and/or channels with other data link agencies (e.g., Joint Interface Control Officer). **(T-3)** Coordinate the designation and use of frequencies and/or channels assigned to interface data links and voice coordination networks. **(T-3)** Implement changes in interface configurations as directed. **(T-3)** Recommend changes in data link configurations to the SL and/or AST/SSO/MSO. **(T-3)**
- 6.4.3.17. Ensure database ATO information is correct and current. **(T-3)** Configure and manage the system database. **(T-3)** Recommend system configuration changes to the mission crew (i.e., AST/SSO/MSO or SL) as appropriate. **(T-3)** Coordinate computer problems and workarounds as required. **(T-3)**
- 6.4.3.18. Perform duties from the TOC, joint tactical information distribution system module, or from any suitable area with access to a link monitoring capability. **(T-3)**
- 6.4.3.19. Assist the AST/SSO/MSO in implementation of the operational tasking data link and ensure interface units are complying. **(T-3)**
- 6.4.3.20. Ensure concurrent TDL (i.e., stacked nets or multi-TDL) operations are not conducted unless specifically mentioned in the operational tasking data link, directed by the Joint Interface Control Officer and/or Region or Sector Interface Control Officer, or are planned during mission planning. **(T-3)**

6.4.3.21. Terminate TDLs only after receiving operational release from the appropriate controlling authority (e.g., Joint Interface Control Officer). **(T-3)** However, if uncoordinated for whatever reason, notify the controlling authority as soon as possible if an emergency termination of a link becomes likely or necessary. **(T-3)**

6.4.3.22. Ensure transmission of change data orders to resolve environment and identification conflicts and recommend system configuration changes are passed to the AST/SSO/MSO as appropriate. **(T-3)**

6.4.3.23. Perform and/or coordinate system resets and/or initial program loads as directed. **(T-3)**

6.4.3.24. Evaluate remote radar data for correlation (i.e., considered correlated when within 2 nautical miles and 2 degrees), of the reference radar and ensure data is received on all tracks. **(T-3)**

6.4.3.25. Perform data recording and post-mission data reduction as directed. **(T-3)**

6.4.4. Surveillance Technician (ST)/ MSO, AFSC 1C51, Minimum 3 Level, SEI 943. The ST/MSO will be responsible to the SL and/or the AST/SSO/MSO as assigned for detection, initiation, identification, and maintenance for all tracks within the battle area of responsibility, management area and/or the track production area(s). **(T-3)** The ST/MSO must have knowledge of classification, identification, tracking, and voice tell procedures, and reporting criteria as governed in accordance with applicable theater guidance. **(T-3)** STs/MSOs will be assigned to a BMT and/or SOT. **(T-3)** The ST/MSO will be responsible to perform but not limited to the following:

6.4.4.1. Ensure all tracks are identified within two minutes of detection using reported position, IFF/SIF, precise positive position locating information, pilot maneuvering and/or external sources. **(T-3)**

6.4.4.2. Coordinate computer problems and workarounds with the CFP as required. **(T-3)** Respond to alarms and alerts in a timely manner. **(T-3)**

6.4.4.3. Identify air tracks in the assigned area in accordance with identification procedures specified by the ROE. **(T-0)** Locate and use switch actions to identify tracks. **(T-3)** Interrogate IFF/SIF to display appropriate identification symbology and report conflicts to the SL, WD, and AST/SSO/MSO as appropriate. **(T-3)**

6.4.4.4. Recognize and report electronic attack indications to the SL and/or AST/SSO/MSO. **(T-3)**

6.4.4.5. Interpret track symbols and modifiers. **(T-3)** Read and interpret information displayed on the OWS. **(T-3)** Use switch actions associated with initiating and maintaining tracks. **(T-3)** Use switch actions to maintain surveillance tracks within 2 nautical miles of radar data. **(T-3)**

6.4.4.6. Provide aid to include proper notification procedures to receive and handoff agencies or check-in WD for aircraft emergencies, to include downed aircraft and combat search and rescue and/or personnel recovery operations in accordance with applicable crew aid checklists. **(T-3)**

6.4.4.7. Perform Voice Tell operations with guidance from AFMAN 13-1 CRCV3, AFTTP 3-3.CRC, and AFTTP 3-3.IPE, as directed. **(T-3)**

6.4.4.8. Create/Modify/Delete doctrine as required to meet mission needs. **(T-3)**

6.4.5. EPT, AFSC 1C5, Minimum 5 level, SEI 944. The EPT will be responsible to the SL or AST/SSO/MSO for electronic protection using the AN/TPS-75. **(T-3)** The EPT will recognize and control the effects of electronic attack and maintain the radar's presentation and emissions utilizing the AN/TPS-75 system displays, electronic protection functions, switch actions, and established tactics, techniques, and procedures. **(T-3)** Individuals certified in the EPT position will be previously qualified and maintain a current qualification in a CMR position (e.g., AST/SSO, MSO, ICT, ST, or WD). **(T-3)** Assigned personnel possessing the 1C8 AFSC will not be required to maintain a CMR position in the CRC. **(T-3)** The EPT will be responsible for, but not limited to the following:

6.4.5.1. Ensure AN/TPS-75 shelter communication and mission systems are operationally configured, loaded, and powered to meet mission requirements. **(T-3)**

6.4.5.2. Extract weather information (e.g., air pressure and temperature, and relative humidity) from weather reports and configure proper settings to neutralize the effects of anomalous propagation, thunderstorms, and weather anomalies. **(T-3)**

6.4.5.3. Control, configure, monitor, and interpret the operational status of the AN/TPS-75 using the radar control panel in accordance with checklists and unit LOPs. **(T-3)**

6.4.5.4. Conduct PREP assessment to provide the optimum configuration of the radar utilizing [Attachment 2](#). **(T-3)** Ensure radar data is correlated within tolerances of the referenced radar and data is received on all tracks within assigned area in accordance with T.O. 31P3-2TPS-75-56WC-1 and assessment is passed to the AST/SSO/MSO. **(T-3)**

6.4.5.5. Assist in the development of the CRC and/or DR emission control plan, electronic protection tactics, techniques, and procedures, and radar employment plans in accordance with threat analysis provided by the MPC INTEL section **(T-3)** Ensure coordination through higher echelon authority prior to implementation. **(T-3)** The EPT will also implement the unit emission control plan as directed to counter electronic attack. **(T-3)**

6.4.5.6. Select appropriate video(s) to detect jammers and associated jammer track(s) and coordinate with other BMC2 nodes and agencies to identify and locate jammers or other sources of interference. **(T-3)** Additionally, the EPT will recognize and inform the AST/SSO/MSO when electronic attack is experienced. **(T-3)** Submit electronic attack and spectrum interference resolution reports when jamming and/or interference is encountered. **(T-3)**

6.4.5.7. Know the in-theater anti-radiation missile threat to include an analysis of possible carriers' capabilities and probable carrier attack profiles gained from MPC INTEL analysis and/or briefings, and information contained in AFTTP 3-1.IPE, AFTTP 3-3.IPE, and AFTTP 3-3.CRC. **(T-3)**

6.4.5.8. Perform IFF/SIF mode checks as applicable in accordance with checklists, LOPs, and theater directives. **(T-3)**

6.4.5.9. Recognize, track, and report aircraft emergencies to the AST/SSO/MSO. **(T-3)**

- 6.4.5.10. Perform assistance actions referencing appropriate checklists, LOPs, and AST/SSO/MSO direction. **(T-3)**
- 6.4.5.11. Monitor mission control frequencies as directed. **(T-3)**
- 6.4.5.12. Recognize and report unusual presentations (e.g., electronic attack, electronic protection, anomalous propagation, weather) to the AST/SSO/MSO. **(T-3)**
- 6.4.5.13. Notify the AST/SSO/MSO when electronic or mechanical interference is observed. **(T-3)**
- 6.4.5.14. Enter jamming strobes after coordination with the AST/SSO/MSO. **(T-3)**
- 6.4.5.15. Monitor and provide support to combat search and rescue and/or personnel recovery operations as directed. **(T-3)**
- 6.4.5.16. Configure assigned radios for voice tell operations. **(T-3)**
- 6.4.5.17. Build and assign voice communications circuits as directed. **(T-3)**
- 6.4.5.18. Recognize, report, and counter communications jamming. **(T-3)**
- 6.4.5.19. Prepare and conduct a positional changeover briefing with the on-coming EPT with the positional changeover briefing guide and unit LOPs, if applicable. **(T-3)**
- 6.4.5.20. Perform a radar correlation check when tasked. **(T-3)**
- 6.4.5.21. Comply with all safety factors required for safe operation and mission accomplishment. Ensure appropriate safety checks are accomplished as needed. **(T-2)** Ensure adequate coordination to prevent unsafe acts. Electrical, fire, physical and radiation hazards will be annotated and immediately reported. **(T-2)** All crewmembers will know the location of safety equipment and explain the proper use. **(T-2)**
- 6.4.5.22. Demonstration of strict professional mission crew discipline will be conducted throughout all phases of the mission.

ADRIAN L. SPAIN, Lt Gen, USAF
Deputy Chief of Staff, Operations

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

- FAA JO 7610.14, *Non-Sensitive Procedures and Requirements for Special Operations*, 5 October 2023
- CJCSI 3320.03D, *Joint Communications Electronic Operating Instructions*, 25 June 2018
- CJCSM 6120.01, *Joint Multi-Tactical Data Link Operating Procedures Overview*, 9 April 2021
- DoDM 5200.01V1_AFMAN 16-1404V1, *Information Security Program: Overview, Classification and Declassification*, 06 April 2022
- DoDM 5200.01V2_AFMAN 16-1404V2, *Information Security Program: Marking of Classified Information*, 07 January 2021
- DoDM 5200.01 Volume 3/AFMAN 16-1404 Volume 3, *Information Security Program: Protection of Classified Information*, 12 April 2022
- JP 3-01, *Countering Air and Missile Threats*, 6 April 2023
- JP 3-09, *Joint Fire Support*, 10 April 2019
- JP 3-52, *Joint Airspace Control*, 22 October 2022
- ATP 3-01.7, *Air Defense Artillery Brigade Techniques*, 16 March 2016
- FM 6-99, *U.S. Army Reports and Message Formats*, 17 May 2021
- DAFI 90-160, *Publications and Forms Management*, 14 April 2022
- DAFI 90-302, *The Inspection System of the Department of the Air Force*, 15 March 2023
- DAFMAN 11-401, *Aviation Management*, 27 October 2020
- DAFMAN 90-161, *Publishing Processes and Procedures*, 18 October 2023
- DAFPD 13-1, *Command and Control (C2) Enterprise*, 12 April 2021
- AFPD 10-24, *Mission Assurance*, 5 November 2019
- AFDP 3-0, *Operations and Planning*, 04 November 2016
- AFDP 3-01, *Counterair Operations*, 15 June 2023
- AFDP 3-03, *Counterland Operations*, 21 October 2020
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AFTTP 3-3.IPE, *Combat Aircraft Fundamentals - IPE*, 4 February 2022

AFTTP 3-3.TACS, *Theater Air Control System – (TACS)*, 10 September 2021

Technical Order 00-33A-1001, *Cyberspace Operations and Maintenance Practice*, 01 July 19

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Prescribed Forms

None

Adopted Forms

DAF Form 847, *Recommendation for Change of Publication*

AF Form 4145, *Daily Activity Log*

AF Form 4146, *Mission Briefing Guide*

Abbreviations and Acronyms

ABM—Air Battle Manager

ACC—Air Combat Command

ACP—Allied Communications Publication

ACS—Air Control Squadron

ADAFCA—Air Defense Artillery Fire Control Assistant

ADAFCO—Air Defense Artillery Fire Control Officer

AETC—Air Education and Training Command

AF—Air Force

AFDP—Air Force Doctrine Publication

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFTTP—Air Force Tactics, Techniques, and Procedures

AFSC—Air Force Specialty Code

ALSSA—Air Land Sea Space Application

ANG—Air National Guard
AOC—Air Operations Center
AST—Air Surveillance Technician
ATO—Air Tasking Order
ATP—Army Techniques Publication
BMC2—Battle Management Command and Control
BMT—Battle Management Team
C2—Command and Control
CC—Commander
CFACC—Combined Forces Air Component Commander
CFP—Communications Focal Point
CJCSI—Chairman of the Joint Chiefs of Staff Instruction
CJCSM—Chairman Joint Chiefs of Staff Manual
CMR—Combat Mission Ready
COA—Course of Action
COMSEC—Communications Security
CRC—Control and Reporting Center
CUI—Controlled Unclassified Information
DAF—Department of the Air Force
DAFI—Department of the Air Force Instruction
DAFMAN—Department of the Air Force Manual
DAFPD—Department of the Air Force Policy Directive
DO—Director of Operations
DoDM—Department of Defense Manual
DR—Deployed Radar
EPT—Electronic Protection Technician
FAA—Federal Aviation Administration
FTU—Formal Training Unit
GBMC2—Ground Battle Management Command and Control
HAF—Headquarters Air Force
HQ—Headquarters
IC—Interim Change

ICT—Interface Control Technician
IFF—Identification, Friend, or Foe
INTEL—Intelligence
JFACC—Joint Forces Air Component Commander
JFC—Joint Forces Commander
JP—Joint Publication
LOP—Local Operating Procedure
MAJCOM—Major Command
MDH—Mission Duty Hours
MPC—Mission Planning Cell
MSO—Mission System Operator
NAF—Numbered Air Force
NGB—National Guard Bureau
NMT—No More Than
OIF—Operations Information File
OPR—Office of Primary Responsibility
OPSEC—Operations Security
OWS—Operator Workstation
RADC—Regional Air Defense Commander
ROE—Rules of Engagement
PREP—Periodic Radar Evaluation Program
PU—Participating Unit
SADC—Sector Air Defense Commander
SEI—Special Experience Identifier
SIF—Selective Identification Feature
SL—Section Lead
SOT—Sensor Operations Team
SS—Site Support
SSO—Senior System Operator
ST—Surveillance Technician
TACS—Theater Air Control System
TAGS—Theater Air-Ground System

TDL—Tactical Data Link

T.O.—Technical Order

TOC—Tactical Operations Center

UCC—Unit Command Center

US—United States

USAFE-AFAFRICA—United States Air Forces in Europe-Air Forces Africa

USC—United States Code

UTC—Unit Type Code

WD—Weapons Director

Office Symbols

ACC/A3C—ACC, Command and Control and Intelligence Surveillance and Reconnaissance Division

ACC/A3CG—ACC Ground Battle Management Systems Branch

ACC/A3TV—ACC Standardization Branch

AF/A3—AF Deputy Chief of Staff for Operations

AF/A3T—AF Training and Readiness Directorate

AF/A3TE—AF Exercises and Training Division

NGB A3/10—NGB Director of Operations

USAFE—AFAFRICA/A3ZJ—USAFE-AFAFRICIA Command and Control Management Branch

Attachment 2

PERIODIC RADAR EVALUATION PROGRAM (PREP)

A2.1. The periodic Radar Evaluation Program (PREP). In accordance with AFI 13-101, *Evaluation of Ground Based Radar Systems and Sensors Supporting Command Control (C2) Enterprise*, and ACC Supplements, the PREP provides unit leadership with a tool for determining the capability of each assigned radar to detect, identify, track and control aircraft. Additionally, it determines aircraft height, permanent echoes, ground returns, clutter, radar performance parameters, and maximizes operational readiness ensuring maximum detection ranges and flight safety. The PREP also determines the system configuration for optimal performance in a dynamic radar environment. In support of the PREP, units will accomplish, but not be limited to the following:

A2.1.1. Establish a unit PREP task-certification program to include a positional certification for non-EPT certified individuals, in accordance with AFMAN 13-1CRC V1. **(T-3)** In addition to the EPT, individuals selected by the DO are trained and certified (i.e., vice qualified) to conduct daily in-garrison PREP assessment. **(T-3)** Upon completion of the certification program, the DO designates in writing the certification of trained individuals. **(T-3)**

A2.1.2. Provide an assessment of radar system effectiveness utilizing radar Preparation Worksheet at [Figure A2.1.2](#) and record any deterioration of mission capability. **(T-3)** PREPs are conducted during both unit deployment and in-garrison operations using the PREP worksheet. **(T-3)**

A2.1.3. Subjective Assessment: The PREP individual or EPT will evaluate radar quality. **(T-3)** Base radar quality assessment on data analysis of information gathered on aircraft tracking, detection, permanent echoes, ground returns, clutter, radar performance parameters, weather conditions, and radar height readouts. **(T-3)** Assessment results are recorded using the radar Preparation Worksheet in [Figure A2.1](#). **(T-3)**

A2.1.4. The assessment of the radar is made at the beginning of each operations shift or in-garrison training event by the certified PREP individual or EPT. **(T-3)** Results of completed assessment will be passed to the AST/SSO/MSO with a single word: satisfactory, marginal, or unsatisfactory. **(T-3)** Results will be recorded in the operations logbook. **(T-3)**

A2.1.6. The PREP worksheet is maintained on file by the unit for a minimum of 60 days after completion and then destroyed.

Figure A2.1. Radar Preparation Worksheet (Pages 1-2).

QUADRANT 1 360-090								QUADRANT 1 360-090							
100NM IN X_OUT				MODE 3:				100NM IN OUT X				MODE 3:			
START AZ/RNG /				END AZ/RNG /				START AZ/RNG /				END AZ/RNG /			
MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF	
1				11				1				11			
2				12				2				12			
3				13				3				13			
4				14				4				14			
5				15				5				15			
6				16				6				16			
7				17				7				17			
8				18				8				18			
9				19				9				19			
10				20				10				20			
SIF%				RDR%				SIF%				RDR%			
AVG HEIGHT DIFFERENCE								AVG HEIGHT DIFFERENCE							
QUADRANT 2 090-180								QUADRANT 2 090-180							
100NM IN X_OUT				MODE 3:				100NM IN OUT X				MODE 3:			
START AZ/RNG /				END AZ/RNG /				START AZ/RNG /				END AZ/RNG /			
MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF	
1				11				1				11			
2				12				2				12			
3				13				3				13			
4				14				4				14			
5				15				5				15			
6				16				6				16			
7				17				7				17			
8				18				8				18			
9				19				9				19			
10				20				10				20			
SIF%				RDR%				SIF%				RDR%			
AVG HEIGHT DIFFERENCE								AVG HEIGHT DIFFERENCE							
QUADRANT 3 180-270								QUADRANT 3 180-270							
100NM IN X_OUT				MODE 3:				100NM IN OUT X				MODE 3:			
START AZ/RNG /				END AZ/RNG /				START AZ/RNG /				END AZ/RNG /			
MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF	
1				11				1				11			
2				12				2				12			
3				13				3				13			
4				14				4				14			
5				15				5				15			
6				16				6				16			
7				17				7				17			
8				18				8				18			
9				19				9				19			
10				20				10				20			
SIF%				RDR%				SIF%				RDR%			
AVG HEIGHT DIFFERENCE								AVG HEIGHT DIFFERENCE							
QUADRANT 4 270-360								QUADRANT 4 270-360							
100NM IN X_OUT				MODE 3:				100NM IN OUT X				MODE 3:			
START AZ/RNG /				END AZ/RNG /				START AZ/RNG /				END AZ/RNG /			
MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF		MODE C	DHRO	DIFF	
1				11				1				11			
2				12				2				12			
3				13				3				13			
4				14				4				14			
5				15				5				15			
6				16				6				16			
7				17				7				17			
8				18				8				18			
9				19				9				19			
10				20				10				20			
SIF%				RDR%				SIF%				RDR%			
AVG HEIGHT DIFFERENCE								AVG HEIGHT DIFFERENCE							

Attachment 3

VOICE TELL PROCEDURES

A3.1. Voice Tell. When the CRC has been assigned a battle management area (BMA) where either the CRC is unable or coordinating BMC2 units are unable to conduct TDL operations, pre-briefed voice tell procedures will be implemented. **(T-3)** Procedures will be in accordance with AFTTP 3-1.IPE and AFTTP 3-3.IPE, Attachment 1, and AFTTP 3-3.CRC, and CRC crew aids enabling the timely and accurate exchange of track information. **(T-3)** In addition, the following procedures will be implemented:

A3.1.1. The AST/SSO/MSO will coordinate with the SL to ensure an accurate common tactical picture is distributed over the TDL network or provide required voice tell as required. **(T-3)**

A3.1.2. The AST/SSO/MSO will pre-plan for dedicated STs/MSOs who are prepared to receive and/or transmit track data via voice tell format. **(T-3)**

A3.1.3. In voice tell receive mode, the ST/MSO will utilize the pre-briefed tell formats and immediately initiate track data symbology prior to attempting to correlate the told-in track. **(T-3)**

A3.1.4. In both transmit or receive voice tell mode, the ST/MSO will be thoroughly briefed on the applicable remote agency call sign, communications frequencies, the track production area (TPA), and any other pertinent mission data. **(T-3)**

A3.1.5. The CRC surveillance section will voice tell Priority One, Two, and Three tracks until the receiving agency directs cease tell. **(T-3)** The CRC voice tells all other priority (4 - 7) tracks by request only. The following priority track classifications are established and generally universally accepted, but should be pre-coordinated with all agencies:

A3.1.5.1. Priority One – Hostile and/or Faker

A3.1.5.2. Priority Two – Unknown and/or Pending

A3.1.5.3. Priority Three – Emergencies

A3.1.5.4. Priority Four – Defensive Counter Air

A3.1.5.5. Priority Five – Very Important Person Flights

A3.1.5.6. Priority Six – Special Missions

A3.1.5.7. Priority Seven – All other Tracks as directed by the receiving agency (e.g., Neutralized Fakers).

A3.1.5.8. Voice tell will normally be in the United States Message Text Format Track Report, #F753 format, or as amended to meet mission requirements that is pre-coordinated with all agencies. **(T-3)** Voice Tell format will be in accordance with appropriate crew aids. **(T-3)**