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OPERATING PROCEDURES-MODULAR CONTROL SYSTEM (MCS)

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OPR: HQ USAF/XOCE (CMSgt Reta Muasau)

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(MGen Kenneth W. Hess)

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This instruction implements policy guidance in Air Force (AF) Policy Directive 13-1, Theater Air Control System. This instruction establishes guidance for employment of the Modular Control System (MCS) units of the Theater Air Control System (TACS). It establishes procedures for mission planning, execution, and reporting. It describes general duties and responsibilities for personnel serving in either a unit command center, operations support center, or operations modules (OM). For purposes of this instruction, MCS units are defined as Control and Reporting Centers (CRC) and Control and Reporting Elements (CRE). It does not apply to Air Force Reserve Command (AFRC) members and units. Send comments and suggested improvements to this publication on AF Form 847, **Recommendation for Change of Publication**, through channels, to HQ ACC/XOY office symbol, 205 Dodd Blvd, Suite 101, Langley AFB VA 23665-2789. This instruction prescribes and directs the use of AF Forms 4145 and 4146. This instruction is affected by the Paperwork Reduction Act of 1974 as Amended in 1996.

Records Management. Maintain and dispose of all records created by prescribed processes in accordance with AFMAN 37-139, *Records Disposition Schedule*.

Chapter 1

MISSION

1.1. Introduction. The Modular Control System (MCS) is the ground radar element of the Theater Air Control System (TACS). This component consists of any combination of Control and Reporting Centers (CRCs) and Control and Reporting Elements (CREs), tailored to the specific mission requirements in the area of operations. The CRC is the senior radar element and central node responsible to the Air Operations Center (AOC) or Joint Force Air Component Commander (JFACC) for decentralized execution of specific battle management functions. The MCS utilizes multiple sensor inputs (air, land, sea) to provide an integrated recognizable air picture for distribution via data links. The system is interoperable and capable of interfacing with Army air defense assets and theater air defense systems.

1.1.1. Inherent in the MCS is the capability to provide a mobile, sustainable, survivable command and control (C^2) component for an entire theater of operations. The requirements provided by this instruction are based on the following assumptions:

1.1.1.1. The USAF has a valid need for a deployable ground TACS that provides the theater commander with the tools for planning and implementing both offensive and defensive aerospace operations.

1.1.1.2. The theater commander requires a detailed data picture of theater airspace.

1.1.1.3. MCS elements will be:

1.1.1.3.1. Operationally self-supporting for a maximum of ten days of continuous operations via Quick Reaction Package (QRP) unit type codes (UTCs). QRP requires augmentation and resupply after 10 days of continuous operation.

1.1.1.3.2. Interoperable with each other, Airborne Elements of the TACS, other US service components, most allied sensors and weapons systems, and civilian authorities.

1.1.1.3.3. Flexible in both configuration and capability.

1.1.1.3.4. Provided sufficient air, land, or sea transportation to deploy.

1.2. Mission. The MCS mission is to provide the senior theater commander with an additional means to plan, direct, and execute joint or combined air operations. Capabilities and services include providing an air surveillance picture, an aircraft control and force marshaling capability, and a communication network to support air operations and the air command structure.

1.3. Functions. The MCS accomplishes its mission through the execution of the following functions:

1.3.1. Battle Management (BM). BM is command and control of air operations, in a decentralized execution mode, by managing, disseminating and assigning mission tasks defined in appropriate tasking orders. BM includes directing both ground and airborne sensors to ensure complete coverage in assigned areas of responsibility (AOR), coordinating with joint agencies for the creation of integrated communications plans and deconflicting frequency assignments.

1.3.2. Surveillance. Surveillance is initial detection, tracking, identification of airborne tracks, and recognition and reporting of electronic attack (EA).

1.3.3. Weapons Control. Weapons control is the control of offensive and defensive counter air (OCA/DCA) and air refueling missions, coordination of close air support (CAS), search and rescue (SAR) operations, and direction of air defense artillery systems. It includes the execution of the Air Tasking Order (ATO).

1.3.4. Airspace Management. Airspace management is the implementation of the Airspace Control Orders (ACOs) while providing safe passage advisories to airborne assets within their AOR.

1.3.5. Data Link Management. Data link management is the digital display and transfer of battle management data and commands. It maintains the operation of the Modular Control Equipment (MCE) computer, communications systems, and MCE supporting databases. It consolidates sensor inputs into a recognizable air picture for distribution over tactical data links (TADIL). The MCS is capable of interfacing on TADIL-A, TADIL-B, TADIL-C, Army Tactical Data Link (ATDL) 1, TADIL-J and North Atlantic Treaty Organization (NATO) Link 1.

1.3.6. Theater Missile Defense (TMD). TMD includes passive and active defense and attack operations. TMD provides timely threat warning to affected sectors, coordinates Air Defense Artillery (ADA) commit actions, and estimates missile origination for subsequent weapons employment. Units equipped with the expert missile tracker AN/TPS-75 radar modification are capable of providing this function.

1.4. MCS Configurations. Standard MCS configurations are CRC or CRE. Depending on mission requirements, these elements may be tailored for flexible employment via UTC.

1.4.1. CRC. The CRC, the senior radar element within the MCS, is normally subordinate to the AOC and provides a communications hub in support of its functions: battle management, weapons, airspace management, surveillance, data link management and TMD. A standard CRC employs four MCE Operations Modules (OMs), two AN/TPS-75 radars, Tri-Service Tactical Communications System (TRI-TAC) communications equipment, and supporting equipment. CRCs extend radar coverage through the use of multiple sensors and remoting techniques.

1.4.2. CRE. A CRE is normally subordinate to the CRC providing communications in support of its functions: limited battle management, weapons, airspace management, surveillance, data link operations and TMD. Due to manning and equipment limitations, a CRE can perform command and control of air operations, in a decentralized execution mode, by managing, disseminating, and assigning mission tasks defined in appropriate tasking orders (limited battle management). A standard CRE employs two MCE OMs, one AN/TPS-75 radar, TRI-TAC communications equipment, and supporting equipment.

Chapter 2

ORGANIZATION

2.1. General. The MCS is an integral part of the TACS as described in Manual for Tactics, Techniques, and Procedures 3-1, Volume 26. The MCS provides the AOC a primary interface for centralized command of C2 agencies from all the services. During execution, the combat operations section of the AOC provides real-time direction and guidance on behalf of the Joint Force Air Component Commander (JFACC). The AOC disseminates the JFACC's C^2 information and directions in the form of the ATO, ACO, and Operational Tasking for Link Operations (OPTASKLINK). The MCS executes these orders and other theater Operation Orders (OPORDs) in conjunction with other agencies.

2.1.1. ATO/ACO. The ATO/ACO provides a schedule of all planned aircraft sorties and tasks TACS elements to provide force management and support during its execution. The CRC/CRE is responsible for ensuring its taskings in support of the ATO are accomplished. It also oversees the execution of all ATO/ACO taskings of subordinate units. CRC and CRE battle staffs are responsible for reviewing the ATO/ACO and providing direction to their operations sections for execution. In addition, CRC and CRE battle staffs are responsible for informing the AOC combat operations section on the status of ATO/ACO execution, required changes to the ATO/ACO, results of ATO missions (battle damage assessment (BDA), air-to-air engagements, etc), and inputs for the next ATO/ACO to be published.

2.1.2. OPTASKLINK. The OPTASKLINK is used to provide the detailed information regarding the operation of tactical data links, including the information required to establish such links. It is promulgated by the Area Air Defense Commander (AADC) on behalf of the JFACC. The designated Interface Control Unit (ICU) for a particular theater will direct its execution.

2.2. Joint Tactical Air Operations (JTAO). Integration and coordination among all C2 units deployed to a particular theater is paramount for effective JTAO operations. Important to MCS units is the training, the development of procedures, and the use of equipment to support these functions. CRCs and CREs must be fully trained to execute the ATO, ACO, and OPTASKLINK in a joint environment. Force management and control of weapons systems is dependent upon the effective operations of the TACS. The entire system is dependent upon effective use and control of data links. The AOC is normally responsible for publishing the OPTASKLINK and establishing the link architecture. The AOC will normally be designated the ICU. The ICU will act as the Net Control Station (NCS) for the Data Control Net (DCN), i.e., be the ruling authority for data link decisions for the TACS. The AOC will designate a TADIL-A NCS (normally an Airborne Warning and Control System (AWACS)) to perform the function for TADIL-A participants. Additionally, voice nets in a joint environment include the Track Supervision Net (TSN), Voice Production Net (VPN), and the Interface Control Net (ICN). Each net has a specific purpose and will have a NCS designated. JTAO operations are defined in the JTAO Procedural Handbook.

2.3. Degraded Operations. Personnel available and equipment on hand play an important role in determining who can assume the missions of others within the TACS. For example, should an AOC go down, the Marine Tactical Air Command Center may be the most suitable alternate. The MCS portion of the TACS provides the same flexibility in accomplishing the mission.

2.3.1. Level 1 Fully Mission Capable:

2.3.1.1. Data link capable.

2.3.1.2. Able to exchange surveillance and C2 information over data links.

2.3.1.3. Control functions are fully operational.

2.3.2. Level 2 Limited Operations:

2.3.2.1. Limited data link.

2.3.2.2. Some degradation in computer capability.

2.3.2.3. Able to exchange limited surveillance and C2 information over data link.

2.3.2.4. Track capacity limited.

2.3.2.5. Basic control functions are operational.

2.3.3. Level 3 Data Link Restricted:

2.3.3.1. Data links are inoperative/not available, but computer is operational.

2.3.3.2. Can voice tell surveillance information and commands and enter them manually into the system.

2.3.3.3. Basic control functions are operational.

2.3.4. Level 4 Manual:

2.3.4.1. Complete loss of computer capability.

2.3.4.2. All surveillance and/or weapons control functions are performed manually from the AN/TPS-75 radar van.

Chapter 3

CONTROL AND REPORTING CENTER (CRC) OPERATIONS

3.1. Mission. The CRC directs control and surveillance assets within the assigned AOR to support mission execution. The CRC is assigned a geographical AOR within which it manages and directs all air defense and airspace management activities. Specific tasks of the CRC will vary; however, the CRC is equipped, manned, and trained to establish communications, provide continuous surveillance, assist in air rescue operations, provide aircraft control and advisory services, establish and maintain data links, gather and forward intelligence products, provide identification of airborne objects, and provide threat warnings to forward, lateral, and subordinate elements and theater missile defense. The CRC establishes communications with and directs air defense artillery (ADA) units within the assigned AOR. AWACS, Joint Surveillance Target Attack Radar System (Joint STARS), RIVET JOINT, and Airborne Battlefield Command and Control Center (ABCCC) aircraft support and assist the CRC in the management of activities within the AOR.

3.2. Unit Command and Control. The CRC unit commander is an Air Force/Air National Guard (ANG) field grade officer possessing a 13B3D Air Force Specialty Code (AFSC). The Director of Operations (DO), AFSC 13B3D, is responsible for ensuring operations personnel are trained, equipped, and available to execute the tasks associated with the unit's functional areas. The CRC unit commander is normally designated the primary Battle Commander (BC) with the DO acting as the alternate BC. The BC is ultimately responsible for all CRC contingency activities. These activities generally fall into two areas: mission support (communications, maintenance, supply, etc) and crew operations. The BC establishes a command post (CP) to direct mission support and operations support activities.

3.2.1. Mission Support Activities. Positions and associated responsibilities for mission support activities are as follows:

3.2.1.1. System Control (SYSCON). The SYSCON function maintains overall responsibility for ensuring the quality of all communications/data systems. The SYSCON will:

3.2.1.1.1. Manage unit communications configuration/operations in accordance with (IAW) OPORD Annex K or other theater communications directives.

3.2.1.1.2. Communicate systems status, problem resolution, and system alternatives to both higher and lower echelons.

3.2.1.1.3. Keep the commander informed of all communications/data system activities.

3.2.1.1.4. Ensure integration of joint/combined command, control, communications, computers, and intelligence (C^4I) systems with those of the CRC.

3.2.1.1.5. Function as system administrator.

3.2.1.2. Job Control. This function facilitates maintenance and repair of equipment to include coordinating and directing maintenance and repair of equipment, maintaining equipment status, dissemination of equipment status reports, maintaining the maintenance and engineering net, maintaining status of maintenance personnel availability, and reporting equipment status to the commander.

3.2.1.3. Site Support. The site support function is responsible for personnel issues to include medical, food, water, sleeping arrangements, etc. This function is also responsible for monitoring personnel availability and replacement sourcing.

3.2.1.4. Security. (See Ground TACS [GTACS] Concept of Operations, Annex D.) The Unit Manning Document (UMD) designates the Chief of Security Forces (CSF). The CSF is responsible for preliminary site sweep, perimeter patrols, determination of listening/observation posts, point defenses, and the site's entry control point.

3.2.1.5. Disaster Preparedness (DP). DP provides the unit with recovery/decontamination control/evacuation plans and checklists related to all disasters (accidental, war-related, or natural) that may be anticipated in the theater of operation.

3.2.2. Operations Support Activities. The BC directs information flow requirements to support combat crews within the OMs. This function ensures all mission requirements are met through coordinating with external agencies and the Battle Staff Coordinator (BSC) in the CP. Information is received and disseminated through a variety of mediums using a variety of equipment. The operations support function ensures information flows throughout the system as effectively as possible. The CRC operations support section is comprised of the Mission Planning Cell (MPC) Officer, an Operations Coordinator (OC), and a Battle Staff Coordinator (BSC). Specific information on positional requirements and associated responsibilities are contained in paragraph **3.2.3.** and **3.4.**

3.2.3. MPC. The MPC provides other CRC functional areas with the support and information required to accomplish the mission. The DO directs the MPC and the information flow requirements to support combat crews within the OMs. This function ensures all mission requirements are met through coordinating with external agencies and the BSC in the CP. Information is received and disseminated through a variety of mediums. The MPC prepares the operations crews for their tours of duty and ensures information flows throughout the system as effectively as possible. Specific information on positional requirements and associated responsibilities are listed below.

A CRC Mission Planning Cell is composed of:

One MPC Chief

One AST

One OC

One Intel Officer/NCO

One ADP Operator

One CTAPS Operator

NOTE: WD, ICT, DST, and EPT personnel from the mission crew may augment the MPC, as necessary.

3.2.3.1. MPC Chief, AFSC 13BXX. The MPC Chief is a Combat Mission Ready (CMR) Mission Crew Commander (MCC) and reports to the unit Commander. The MPC Chief directs the activities of the MPC. The MPC Chief will:

3.2.3.1.1. Conduct the weapons portion of the crew briefings.

3.2.3.1.2. Identify specific mission objectives.

3.2.3.1.3. Plan crew emergency action "banjo" procedures.

3.2.3.1.4. Approve scope layout/positional manning.

3.2.3.1.5. Approve the communications plan.

3.2.3.1.6. Approve Emission Control (EMCON), electronic protection (EP), and initial radar plans.

3.2.3.1.7. Act as liaison with the AOC.

3.2.3.1.8. Act as inter-service coordinator.

3.2.3.1.9. Develop the MCC smart pack.

3.2.3.2. OC, AFSC 1C571. The OC directs the flow of information into and out of the MPC and serves as a direct link to the MCC. The OC will:

3.2.3.2.1. Maintain appropriate displays and records for briefing purposes.

3.2.3.2.2. Ensure all necessary equipment and supplies are available for operations activities.

3.2.3.2.3. Respond to the needs of the MCC for information.

3.2.3.2.4. Ensure record communications/reports are produced and forwarded IAW **chapter 5** and 6.

3.2.3.2.5. Maintain the operations logbook IAW **chapter 6**.

3.2.3.2.6. Coordinate with job control on equipment outages, advise the MCC of the operational impact, and track Estimated Time to Return Operational (ETRO) status.

3.2.3.2.7. Ensure communications security (COMSEC)/classified inventories are completed and issue COMSEC material as required.

3.2.3.2.8. Ensure current weather and winds aloft are reported to the DST for entry into the MCE database.

3.2.3.2.9. Serve as the single point of contact for reporting all MCS equipment problems or outages to Job Control. Job Control notifies necessary specialists and opens a JCN, if necessary. The OC ensures JCNs are obtained from Job Control and entered into the ops logbook. OC advises the AST and MCC of operational impact.

3.2.3.2.10. Prepare crew change-over briefs as directed by the DO.

3.2.3.2.11. Brief the relieving OC.

3.2.3.3. Intelligence Officer/NCO, AFSC 14XX/1NXX. The Intelligence Officer/NCO represents the Combat Air Forces (CAF) Headquarters Intelligence Staff and reports to the MPC Chief. The Intel officer/NCO will monitor the VPN and provide updates as required. The Intelligence officer/NCO will:

3.2.3.3.1. Advise BC/MCC on the threat: enemy deployment, employment, tactics, and capabilities.

3.2.3.3.2. Review and analyze intelligence data.

3.2.3.3.3. Maintain current situation maps/displays and intelligence library.

3.2.3.3.4. Coordinate and integrate intelligence data from all sources available.

3.2.3.3.5. Conduct studies of enemy areas and prepare intelligence briefings/reports.

3.2.3.3.6. Receive and relay all in-flight reports and other intelligence items to the AOC and other TACS elements as necessary.

3.2.3.4. ADP Operator, AFSC 3C0X1. The ADP operator is responsible to the MPC Chief for operating automated data processing equipment in support of CRC operations and for transmitting, receiving, and distributing operations record communications, as required. Systems may include weather teletype (TTY) equipment, and/or personal computer (PC) systems. The ADP operator will:

3.2.3.4.1. Extract hard copy weather information.

3.2.3.4.2. Transmit, receive, and distribute, record communications and other data as directed.

3.2.3.4.3. Maintain a current read file of all message traffic received and distributed.

3.2.3.5. AST, AFSC 1C571. The AST is responsible to the MPC Chief. The AST will:

3.2.3.5.1. Determine COMSEC requirements.

3.2.3.5.2. Determine data filter requirements.

3.2.3.5.3. Conduct the surveillance portion of the crew briefing.

3.2.3.5.4. Define the area of responsibility/track production area.

3.2.3.5.5. Define the identification criteria/develop identification (ID) matrix.

3.2.3.5.6. Provide inputs for communications plan.

3.2.3.5.7. Develop surveillance smart packs.

3.2.3.6. CTAPS operator, AFSC 1C53/51. The CTAPS operator is responsible to the MPC Chief. The CTAPS operator will:

3.2.3.6.1. Operate the CTAPS terminal.

3.2.3.6.2. Assist the MPC Chief/WD with breaking out CTAPS messages.

3.2.3.6.3. Be thoroughly trained to initialize and operate the appropriate equipment.

3.2.3.6.4. Extract and produce hard copy message data terminal/CTAPS products.

3.2.3.6.5. Properly mark and safeguard classified message products.

3.2.3.7. WD, AFSC 1C55/71D. The WD is responsible to the MPC Chief and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the WD returns to crew operations. For initial planning the WD will:

3.2.3.7.1. Brief Special Instructions/Rules of Engagement (SPINS/ROE)

3.2.3.7.2. Provide inputs to communications plan.

3.2.3.7.3. Coordinate with ADA/Naval air/external control agencies.

3.2.3.7.4. Breakout ATO/ACO.

3.2.3.7.5. Develop weapons smart pack.

3.2.3.8. ICT, AFSC 1C55/71. The ICT is responsible to the AST and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the ICT returns to crew operations. For initial mission planning the ICT will:

3.2.3.8.1. Extract data link requirements from the OPTASKLINK.

3.2.3.8.2. Provide inputs for data link plan.

3.2.3.8.3. Brief link participants.

3.2.3.9. EPT, AFSC 1C55/71. The EPT is responsible to the AST and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the EPT returns to crew operations. For initial mission planning, the EPT will:

3.2.3.9.1. Develop the electronic protection plan.

3.2.3.9.2. Develop the EMCON plan.

3.2.3.9.3. Coordinate with radar maintenance to develop the initial radar plan.

3.2.3.10. DST AFSC 1C55/71. The DST is responsible to the AST and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the DST returns to crew operations. For initial mission planning, the DST will:

3.2.3.10.1. Build the initial MCS database.

3.3. Operations Organization. Execution of the air defense and airspace management activities is accomplished by CRC Operations. CRC Operations performs six functions: battle management, weapons control, airspace management, surveillance, data link management, and theater missile defense . The DO is responsible to the unit commander for supervision of all CRC operations activities regardless of whether employed as the BC or during the unit commander's absence. The DO is responsible for establishing MCS policy and formulating methods and procedures for the unit operations branch. The DO ensures operations crews are trained and available to meet mission requirements.

3.3.1. The BC is operationally subordinate to the AOC's Chief of Combat Operations and is responsible for implementing theater mission control through employment of the control elements of the TACS. The authority to exercise operational control of weapons systems (to include friendly fighters, surface-to-air missiles (SAMs), and ADA units) may be decentralized to the CRC BC. The BC is responsible for the management and direction of the air defense and airspace control activities within the AOR.

3.3.2. Under most circumstances, the BC will work from the CP with the Battle Staff Coordinator (BSC) providing the necessary information required to direct CRC activities. The BSC will coordinate with the CRC operations branch to obtain the required information and pass BC decisions, as required.

3.3.3. BM. The BM function is accomplished through the coordination and integration of four functional areas: weapons, surveillance, data systems, and operations support. The BM positions are the BC, BSC, and MCC. BM reviews headquarters guidance and directives, monitors statuses, develops courses of action, and then implements the guidance within the CRC AOR. The AOC allocates fighter aircraft and ADA to the CRC to defend the assigned AOR. BM then uses these weapons systems to carry out the assigned mission. The BC will normally establish ground rules for the initial

allocation of resources. The MCC continuously coordinates their efforts to eliminate duplication and ensure adequate commitment of assigned weapons against the hostile air threat.

3.3.4. Weapons. The operations weapons section is comprised of the SD, Air Defense Artillery Fire Control Officer (ADAFCO), and WDs. The SD is responsible for managing the section and employing the assigned weapons systems to cover the threat. The CRC SD allocates fighter resources to subordinate C^2 agencies (CREs and AWACS) and directs their employment. ADA assets and Army missile system employment will be coordinated and directed through the ADAFCO. WDs will provide control and radar service to aircraft within the AOR. WDs will be trained for any and all types of missions to include OCA/DCA, air interdiction, CAS, reconnaissance, airlift, EA, rescue, air refueling, special operations, and emergency aircraft assistance. WDs will be trained to operate from both the OMs and the AN/TPS-75 radar van. Weapons section positional requirements and associated responsibilities are contained in pargraph 3.4.

3.3.5. Surveillance. The CRC surveillance section is headed by the ASO and is responsible for the detection, tracking, identification, and reporting of airborne objects within the AOR. The surveillance section is comprised of the AST, EPT, and ST. Specific surveillance section positional requirements and the associated responsibilities are contained in paragraph **3.4.**

3.3.5.1. Important to note is that the ASO supervises both the surveillance and data link functions at a CRC. The ASO is normally designated the Track Data Coordinator (TDC) for the assigned AOR.

3.3.5.2. To ensure effective airspace management, expeditious identification is essential. The actual procedures and methods of identifying airborne objects are determined by the AADC for the theater. During normal readiness conditions, the primary requirement is to detect and identify any air activity that might indicate an air attack against targets within the TACS AOR. Once combat operations have commenced, timely and accurate aircraft identification is essential to conserve air defense assets and to permit efficient engagement of airborne targets. Airspace control directly impacts on the performance of the identification process. Establishment of weapons free areas, identification zones, and safe passage areas and aircraft identification procedures will depend upon geographical location, type mission, available facilities, and other pertinent circumstances.

3.3.6. Data Systems. Data systems is responsible for the digital display and transfer of battle management data and commands. These individuals maintain the operation of the MCE computer, communications systems, and MCE supporting databases. They use digital interface systems to provide the AOC and other data link capable assets within the theater a recognizable air picture. Data systems is headed by the ASO/AST and is further comprised of the ICT and the DST. The ICT is responsible for establishing and maintaining high speed digital data communications networks to enable users to view a near-real-time recognizable air picture. Theater users may be Air Force, Army, Navy, Marine Corps, and allied nations. When more than one service or nation is involved, the data systems function provides the information to establish JTAO. At the CRC, data systems will be tasked to support the data link needs of the unit. However, this section may also be tasked to direct and manage data links for the entire theater. When this tasking occurs, data systems will be designated the theater ICU. The DST is responsible for the digital display and transfer of battle management data and commands. Paragraph **3.4.** contains data systems positional requirements and associated responsibilities.

3.4. Operations Crew's Duties and Responsibilities. A CRC crew is defined below. Following that, the positional descriptions highlight the CRC crew duties and responsibilities.

One BC

One BSC

One OC

One MCC

One Senior Director (SD)

One Air Defense Artillery Fire Coordination Officer (ADAFCO)

Four WDs

One Air Surveillance Officer (ASO)

One AST

Four Surveillance Technicians (STs)

Two EPTs

One ICT

One DST

3.4.1. BC. The BC directs the battle staff to:

3.4.1.1. Identify air traffic within the assigned AOR IAW theater directives.

3.4.1.2. Control assigned offensive and defensive missions IAW theater rules of engagement (ROE).

3.4.1.3. Commit allocated weapons to counter the hostile threat IAW theater ROE.

3.4.1.4. Determine alert statuses and disseminate this information for all air defense systems under operational control of the BC.

3.4.1.5. Ensure accurate and timely air situation data, theater action results, equipment, and weapons status reports are provided to the AOC.

3.4.1.6. Provide pre/post-mission briefings to subordinate/lateral elements.

3.4.1.7. Submit the Air Defense Fighter Status reports to the AOC as of 0001Z by each squadron tasked for air defense alert. As changes occur, submit them to the AOC or lead CRC and to other elements, as appropriate. Use US Message Text Format (USMTF).

3.4.2. BSC, AFSC 1C57/91. The BSC ensures the battle commander is up-to-date on the current operational situation. The BSC also ensures operations is aware of site configurations and pertinent information (Alert Condition status, Mission-Oriented Protective Posture (MOPP) levels, etc.). This senior NCO will:

3.4.2.1. Coordinate with the OC to ensure the most current operations information is available in the CP.

3.4.2.2. Provide update briefings as required to the commander.

3.4.2.3. Provide the operations data required for the commander’s situation report (SITREP) and any other required reports.

3.4.2.4. Update operations on support status as it impacts the mission.

3.4.2.5. Manage/supervise the operation of the ADP systems (CTAPS, UGC-144, PCs, etc).

3.4.2.6. Perform overall management of operations crew personnel.

3.4.2.7. Resolve operations crew and personnel issues as required.

3.4.2.8. Brief the relieving BSC.

3.4.3. OC, AFSC 1C571. The OC directs the flow of information into and out of the MPC and serves as a direct link to the MCC. The OC will:

3.4.3.1. Maintain appropriate displays and records for briefing purposes.

3.4.3.2. Ensure all necessary equipment and supplies are available for operations activities.

3.4.3.3. Respond to the needs of the MCC for information.

3.4.3.4. Ensure record communications/reports are produced and forwarded IAW **chapter 5** and 6.

3.4.3.5. Maintain the operations logbook IAW Chapter 6.

3.4.3.6. Coordinate with job control on equipment outages, advise the MCC of the operational impact, and track ETRO statuses.

3.4.3.7. Ensure communications security (COMSEC)/classified inventories are completed and issue COMSEC material as required.

3.4.3.8. Ensure current weather and winds aloft are reported to the DST for entry into the MCE database.

3.4.3.9. Serve as the single point of contact for reporting all MCS equipment problems or outages to Job Control. Job Control notifies necessary specialists and opens a JCN, if necessary. The OC ensures JCNs are obtained from Job Control and entered into the operations logbook. OC advises the AST and MCC of operational impact.

3.4.3.10. Prepare crew change-over briefs as directed by the DO.

3.4.3.11. Brief the relieving OC.

3.4.4. MCC, AFSC 13B3D. The MCC is responsible to the BC for overall crew supervision and performance during an assigned tour of duty. The MCC must be adept in evaluating the air situation, determining appropriate theater actions, and coordinating with the BC to ensure the most effective flow of friendly air traffic. The MCC also coordinates the unit's operations interface and coordination requirements with other TACS elements and services. The MCC is the CRC's primary interface with the AOC and, in a joint environment, monitors and uses the ICN to pass time-sensitive command information. The MCC will:

3.4.4.1. Conduct crew briefings prior to going on duty.

3.4.4.2. Coordinate with other agencies engaged in air operations.

3.4.4.3. Disseminate air defense warnings to all lateral and subordinate units.

3.4.4.4. Understand the TACS system capabilities, associated radars, and the capabilities of other C^2 systems, e.g., ABCCC, AWACS, Joint STARS, CRE, etc.

3.4.4.5. Ensure CREs and subordinate units maintain current and accurate air situation data.

3.4.4.6. Direct subordinate units and specify configuration when authorized to do so.

3.4.4.7. Coordinate equipment maintenance schedules.

3.4.4.8. Supervise the surveillance, weapons, and data systems functions; ensure coordination and information flow within operations.

3.4.4.9. Submit AF Form 4145, **Daily Activity Log**, at the end of each tour of duty (see **chapter 6**).

3.4.4.10. Ensure operational checks are made on all equipment at the beginning of the assigned tour and outages are reported to the AST.

3.4.4.11. Direct database loads and approve MCS configuration changes.

3.4.4.12. Thoroughly brief the relieving MCC.

3.4.5. SD, AFSC 13B3D. The SD is responsible to the MCC for the assignment of allocated weapons, and for coordinating and directing WD and ADAFCO activities. The SD must be proficient in the operation of the console, associated communications equipment, and data link operations related to the weapons function. The SD rapidly evaluates the air defense threat situation and makes timely recommendations to the MCC to counter this threat. The SD supervises the allocation of weapons and management of the weapons function at the CRE. The SD will:

3.4.5.1. Conduct the weapons portion of the crew briefing prior to going on duty.

3.4.5.2. Understand the TACS system capabilities, associated radars, and the capabilities of other C^2 systems, i.e., ABCCC, AWACS, Joint STARS, CREs, etc.

3.4.5.3. Commit air defense weapons systems to counter the threat IAW theater ROE.

3.4.5.4. Assign aircraft and/or missions to WDs.

3.4.5.5. Monitor WDs to ensure effective mission accomplishment and flight safety.

3.4.5.6. Ensure emergency points are entered for downed aircraft and coordinate SAR.

3.4.5.7. Assign radio frequencies commensurate with mission requirements.

3.4.5.8. Coordinate and/or establish Combat Air Patrol (CAP) and hand-over/recovery points, as required.

3.4.5.9. Ensure current ROE is briefed, understood, and executed.

3.4.5.10. Be knowledgeable of the performance characteristics of both friendly and hostile air/ground weapons systems.

3.4.5.11. Coordinate with ADAFCO for Army Air Defense Command Post (AADCP) target assignment.

3.4.5.12. Scramble interceptor fighters and coordinate airborne orders.

3.4.5.13. Ensure all missions are briefed and debriefed when practical.

3.4.5.14. Ensure all WDs are aware of existing and forecasted weather conditions for their AORs and recovery bases.

3.4.5.15. Provide weapons related adaptations to the DST.

3.4.5.16. Be responsible for completing required weapons documentation (see Chapter 6).

3.4.5.17. Direct the weapons section in transitioning to degraded levels of operation.

3.4.5.18. Coordinate with the ASO for system and surveillance changes.

3.4.5.19. Recommend threat mode system changes to the MCC.

3.4.5.20. Thoroughly brief the relieving SD on the current operational situation.

3.4.5.21. Ensure SAM/ADA Weapons Status is submitted to the AOC daily in USMTF.

3.4.5.22. Voice tell changes to the SAM/ADA Weapons Status to the AOC.

3.4.6. ADAFCO. The ADAFCO is responsible to the SD for coordinating air defense of designated facilities/areas and for coordinating and monitoring the command, track, and fire unit information exchange between the CRC and the AADCP. The ADAFCO will:

3.4.6.1. Have a complete knowledge of AF/Army ADA interface operations.

3.4.6.2. Know applicable ADA weapons capabilities and current status of assigned ADA systems.

3.4.6.3. Inform MCC and SD of changes in ADA unit locations and ADA unit status which will effect changes in Missile Engagement Zones (MEZ).

3.4.6.4. Inform the MCC and SD of Army recommended changes in weapons control status.

3.4.6.5. Serve as single point of interface between senior AADCP and the CRC.

3.4.6.6. Direct the senior AADCP to engage all tracks assigned to Army ADA by the SD.

3.4.6.7. Disseminate air defense warnings, weapons alert statuses and other operational control data to and from the AADCP, as required.

3.4.6.8. Coordinate with the ASO/AST to establish critical tracks reported by fire units which are not being digitally reported by the AADCP.

3.4.6.9. When authorized by the SD, transmit appropriate weapons commands to the senior AADCP to ensure effective employment of ADA and air defense resources.

3.4.6.10. Have a working knowledge of MCE switch actions and CRC communications.

3.4.7. WD, AFSC 1C55/71D. The WD is responsible to the SD for the control of aircraft within the CRC AOR. The WD will:

3.4.7.1. Understand the TACS system capabilities, associated radars, and the capabilities of other C^2 systems, i.e., ABCCC, AWACS, Joint STARS, CREs, etc.

3.4.7.2. Be familiar with the performance characteristics, fire control systems, and ordnance loads for all assigned weapons systems.

3.4.7.3. Be skilled in the WD's disciplines to include intercept positioning, refueling operations, offensive mission support, and OCA/DCA control.

3.4.7.4. Keep the SD informed of all changes to mission requirements, mission results, and situations that may affect mission completion or flight safety.

3.4.7.5. Inform aircrews of theater information that may affect mission accomplishment.

3.4.7.6. Forward pilot reports (PIREPs) and BDA reports through appropriate channels to the AOC.

3.4.7.7. Take all necessary actions to maintain flight safety and avoid incidents of fratricide.

3.4.7.8. Provide navigational assistance and emergency assistance, as required/requested.

3.4.7.9. Complete weapons documentation for each tour of duty or at the completion of each mission, as directed by the SD (see **chapter 6**).

3.4.7.10. Use authentication as required.

3.4.7.11. Be qualified to control from the AN/TPS-75 van.

3.4.7.12. Be aware of existing and forecasted weather for both AOR and recovery bases.

3.4.7.13. Accomplish Mode IV checks on all assigned aircraft IAW theater directives.

3.4.7.14. Provide change over briefing to relieving WD.

3.4.8. ASO, AFSC 13B3D. The ASO is responsible to the MCC for the accomplishment of surveillance functions, for supervision of all surveillance personnel, and for providing a theater-wide recognizable air picture. The ASO coordinates with the SD to ensure an accurate display of airspace data. The ASO will:

3.4.8.1. Supervise the identification of all air traffic within the CRC AOR.

3.4.8.2. Supervise the timely and accurate collection, display, and dissemination of air surveillance data to higher, lateral, and subordinate units.

3.4.8.3. Ensure all tracks are properly identified.

3.4.8.4. Brief crewmembers on current or anticipated operations, equipment, and communications status.

3.4.8.5. Understand TACS system capabilities and limitations, as well as other services/allied C^2 system equipment/limitations. Advise the MCC of system capabilities and limitations as they occur.

3.4.8.6. Ensure air surveillance section manning is adequate to meet mission requirements.

3.4.8.7. Direct surveillance configuration at subordinate units to support the overall surveillance mission and data system.

3.4.8.8. Maintain current meteorological information.

3.4.8.9. Ensure the MCC and AOC are notified when electronic interference is observed or reported.

3.4.8.10. Manage and direct data links as defined by the OPTASKLINK (see para 3.8).

3.4.8.11. Coordinate computer problems/workarounds.

3.4.8.12. Ensure emergency points are input for downed aircraft.

3.4.8.13. Approve all cancel track actions.

3.4.8.14. Ensure proper site registration procedures are implemented when required. Direct coordination to resolve registration problems with interfacing units.

3.4.8.15. Recommend threat mode change to MCC when required.

3.4.8.16. Coordinate with MCC on data link or MCS configuration changes.

3.4.8.17. Provide a change-over briefing to relieving ASO.

3.4.8.18. Coordinate identification activities with adjacent air traffic control facilities.

3.4.8.19. Disseminate flight plan information to adjacent and subordinate units.

3.4.9. AST. AFSC 1C571. The AST is responsible to the ASO for directing air surveillance identification functions and will assist in the performance of ASO duties. The AST, in a joint environment, monitors the TSN and provides guidance to ensure the optimum display of air, sea, and ground information. The AST will:

3.4.9.1. Establish, maintain, and forward (through the data link function) a recognizable air picture to the AOC and other C^2 assets in the theater.

3.4.9.2. Supervise Link Management and the detection, tracking, and identification of all air traffic within the CRC AOR while the ASO coordinates and directs track production tasks of all assigned radar elements to establish a recognizable air picture

3.4.9.3. Understand TACS system capabilities and limitations as well as other service/allied C^2 system equipment/limitations.

3.4.9.4. Ensure information concerning anomalous propagation, thunderstorms, or unusual weather conditions are called to the ASO's attention.

3.4.9.5. Notify the ASO immediately when electronic or mechanical interference is observed or reported. Coordinate with the EPT and submit EP reports as required.

3.4.9.6. Ensure jam strobes of the applicable types are displayed after coordination with the EPT. When the system performs the detection and display of jamming, the AST will ensure the jam display is correct.

3.4.9.7. Direct the EPT to coordinate with other unit EPTs to determine if jamming is occurring at their location.

3.4.9.8. Enter and update jammer points (fixes) at suspected emitter locations.

3.4.9.9. When correlation can be determined, enter a track of the appropriate identity in place of the jammer points (fixes).

3.4.9.10. Direct EPT to apply EP as appropriate to negate/reduce presentation degradation.

3.4.9.11. Ensure the surveillance logbook is maintained, as required (see Chapter 6).

3.4.9.12. Assign surveillance AORs to each ST. Ensure all surveillance/identification personnel are aware of mission objectives.

3.4.9.13. Ensure a rotation plan for surveillance/identification positions is followed to ensure adequate relief periods.

3.4.9.14. In a Level 3 or 4 environment, initiate manual tell procedures IAW JTAO handbook, as required/requested.

3.4.9.15. Ensure the DCN is utilized for data link operations.

3.4.9.16. Monitor Performance Monitor and Test (PM&T) function and coordinate equipment discrepancies with job control.

3.4.9.17. Recommend changes in data link configuration to the ASO.

3.4.9.18. If required, assist maintenance technicians in troubleshooting equipment problems.

3.4.9.19. Perform post-mission data reduction as directed by the ASO.

3.4.9.20. Ensure the Recorder/Reproducer Unit (R/RU) and the Printer Unit are operated IAW Chapter 6 and unit directives.

3.4.9.21. Coordinate all Removable Interchangeable Media Module (RIMM) read/write activities.

3.4.9.22. Coordinate system reset/initial program load (IPL) as directed by the ASO.

3.4.9.23. Ensure all MCS equipment problems or outages are passed to the OC. The OC in turn reports information to Job Control and advises MCC/AST of operational impact.

3.4.9.24. Thoroughly understand MCS capabilities and limitations and provide alternative configurations as required.

3.4.9.25. Coordinate identification activities with adjacent air traffic control facilities.

3.4.9.26. Disseminate flight plan information to adjacent and subordinate units.

3.4.9.27. Thoroughly brief the relieving AST.

3.4.10. ST. AFSC 1C53/51. The ST is responsible to the AST for track detection, initiation, identification, and maintenance for all airborne objects within the CRC assigned surveillance AOR. The ST must have a thorough knowledge of identification procedures and criteria for each type of identification. Identification of air traffic is governed through theater OPORD, ACO, and ROE. Specific information and criteria for track identification should be available (depending on the theater) in the OPORD, ATO, ACO, and SPINS. The ST responsibilities include the following:

3.4.10.1. Perform voice tell from AN/TPS-75 van and/or OM as directed by the AST IAW attachment 2.

3.4.10.2. Ensure proper track identification has been assigned to tracks.

3.4.10.3. Notify the AST of all unusual incidents of identification difficulties and tracks that cannot be identified.

3.4.10.4. Correlate data from adjacent sites to ensure track continuity.

3.4.10.5. Enter ACO information into the data base..

3.4.10.6. Be constantly alert for new tracks that appear within the assigned AOR.

3.4.10.7. Report all unusual scope presentations (EA, anomalous propagation, weather, and so forth) to the AST and adjust scope to obtain the best possible presentation.

3.4.10.8. Know radar capabilities and limitations

3.4.10.9. In a Level 3 or 4 environment, receive or forward voice tell information.

3.4.10.10. Coordinate with all flight plan agencies for required data.

3.4.10.11. Preplot and correlate friendly aircraft that are not in the ATO based on available flight plan data.

3.4.10.12. Enter profile test, including missile and hostile data.

3.4.10.13. Enter vital assets.

3.4.10.14. Enter automatic identification, including corridor and maneuver.

3.4.10.15. Enter threat modes.

3.4.10.16. Enter IFF codes, including Assumed Friend Mode 1, Special IFF, NATO Mode 3, Friend Mode 1/3, Mode 2, Special Mode 3, and Mode 4.

3.4.10.17. Ensure Mode IV checks are accomplished IAW theater directives.

3.4.10.18. Thoroughly brief the relieving ST of the current operational situation.

3.4.10.19. Prepare all identification-related data, records, and reports.

3.4.11. EPT, AFSC 1C55/71, Special Experience Identifier (SEI) 270. The EPT is responsible to the AST for coordinating EP. The EPT will:

3.4.11.1. Recommend EMCON measures and levels.

3.4.11.2. Take appropriate actions to negate the effects of anomalous propagation, thunderstorms, unusual weather conditions, and EA.

3.4.11.3. Coordinate with the AST to submit required data for EA reports when jamming interference is encountered IAW **chapter 5**.

3.4.11.4. Coordinate with other units and agencies to identify and locate jammers and sources of interference.

3.4.11.5. Work closely with radar maintenance to ensure optimum levels of radar performance.

3.4.11.6. Inform the ASO/AST when EA is experienced.

3.4.11.7. Coordinate with the ASO/AST CRE to accomplish a correlation check with the FAA or data registration with the theater designated senior radar element.

3.4.11.7.1. Evaluate remote radar data for correlation and ensure data is received on all tracks within the area of interest.

3.4.11.7.2. Ensure the single word PREP assessment is recorded in the OC logbook.

3.4.11.8. Thoroughly brief the relieving EPT.

3.4.12. ICT. AFSC 1C55/71. The ICT is responsible to the AST for establishing data links and monitoring data link effectiveness. The ICT will:

3.4.12.1. Conduct data link operations as directed.

3.4.12.2. Utilize the DCN to coordinate with other data link agencies.

3.4.12.3. Perform initial data link equipment checkout.

3.4.12.4. Coordinate the designation and use of frequencies/channels assigned to interface data links and voice coordination nets.

3.4.12.5. Implement changes in interface configuration as directed.

3.4.12.6. Implement data link filters as directed.

3.4.12.7. Monitor track exchange operations over the data links.

3.4.12.8. Recommend changes in data link configuration to the AST.

3.4.12.9. Thoroughly brief the relieving ICT.

3.4.13. DST. AFSC 1C55/71. The DST is responsible to the AST for monitoring the status of the MCS data base. The DST, in concert with the SD and WDs, ensures ATO information is correct and up-to-date in the MCE computer data base system. The DST will:

3.4.13.1. Plan and coordinate the initial build of the MCE database.

3.4.13.2. Load data base, ensure system configuration meets operational requirements.

3.4.13.3. Monitor PM&T function and report equipment discrepancies to the AST.

3.4.13.4. If required, assist maintenance technicians in troubleshooting equipment problems.

3.4.13.5. Perform post-mission data reduction as directed by the AST.

3.4.13.6. Ensure the R/RU and the Printer Unit are operated IAW unit directives and Chapter 6.

3.4.13.7. Coordinate all RIMM read/write activities.

3.4.13.8. Manage data base and system configuration.

3.4.13.9. Coordinate system reset/IPL as directed by the AST.

3.4.13.10. Recommend and configure system as required.

3.4.13.11. Brief the relieving DST.

Chapter 4

CONTROL AND REPORTING ELEMENT (CRE) OPERATIONS

4.1. Mission. The CRE is a mobile radar command, control and communications element of the TACS. In a standard configuration, the CRE is subordinate to a CRC. The CRE can also be tasked to deploy and operate directly subordinate to the AOC. A CRE can be tasked to perform all or any of the following tasks: limited battle management, weapons control, airspace management, surveillance, identification, data systems and theater missile defense. The CRE may also establish communications with and direct ADA units within the assigned AOR. AWACS, Joint STARS, RIVET JOINT, and ABCCC aircraft will support and assist the CRE in the management of activities within the AOR.

4.2. Unit Command and Control. The CRE unit commander is an Air Force/ANG field grade officer possessing a 13B3D AFSC. The DO, AFSC 13B3D, ensures operations personnel are trained, equipped, and available to execute the tasks associated with the unit's functional areas. The CRE unit commander is the BC with the DO acting as the alternate BC. The BC is operationally subordinate to the CRC BC or the AOC's Chief of Combat Operations. The authority to exercise operational control of weapons systems (to include friendly fighters, SAMs, and ADA units) can be decentralized, as appropriate, to the CRE BC. The BC is responsible for the management and direction of the air defense and airspace control activities within the AOR. Under most circumstances, the BC will work from the command post with the OC providing the necessary information required to direct CRE activities. The OC will maintain communications with the CRE operations branch to obtain the required information and pass BC decisions, as required. The BC commander is ultimately responsible for all CRE activities. These activities generally fall into two areas: mission support (communications, maintenance, supply, etc) and crew operations activities. The BC establishes a CP to direct mission support and operations support activities.

4.2.1. Mission Support Activities. Positions and associated responsibilities for mission support activities are as follows:

4.2.1.1. SYSCON. The SYSCON function maintains overall responsibility for ensuring the quality of all communications/electronics data systems. The SYSCON will:

4.2.1.1.1. Manage unit communications configuration/operations IAW OPORD Annex K or other theater communications directives.

4.2.1.1.2. Communicate systems status, problem resolution, and systems alternatives to both higher and lower echelons.

4.2.1.1.3. Keep the commander informed of all communications/electronic data system activities.

4.2.1.1.4. Ensure integration of joint/combined C^4I systems with those of the CRE.

4.2.1.1.5. Function as system administrator.

4.2.1.2. Job Control. The function of this position is to facilitate maintenance and repair of equipment to include: coordinating maintenance and repair of equipment, maintaining equipment status, dissemination of equipment status reports, maintaining the maintenance and engineering net, maintaining status of maintenance personnel availability, and reporting equipment status to the commander.

4.2.1.3. Site Support. The site support function is responsible for personnel issues to include medical, food, water, sleeping arrangements, etc. This function is also responsible for monitoring personnel availability and replacement sources.

4.2.1.4. Security. (See GTACS Concept of Operations, Annex D.) The UMD designates the CSF. The CSF is responsible for preliminary site sweep, perimeter patrols, determination of listening/ observation posts, point defenses, and establishing the site's entry control point.

4.2.1.5. DP. The DP is responsible for providing the unit with recovery/decontamination control/ evacuation plans and checklists related to all disasters (accidental, war-related, or natural) which may be anticipated in the theater of operation.

4.2.2. Operations Support. The DO directs information flow requirements to support combat crews within the OMs. This function ensures these requirements are met through coordinating with external agencies and the OC in the CP. Information is received and disseminated through a variety of mediums using a variety of equipment. The operations support function is responsible for ensuring information flows throughout the system as effectively as possible. The CRE operations support section provides the other four CRE functional areas with the support and information required to accomplish the mission. Operations support is directed by the DO and is comprised of an intelligence officer/ NCO, CTAPS operator, and ADP operator.

4.2.3. MPC. The MPC provides other CRC functional areas with the support and information required to accomplish the mission. The DO directs mission planning and the information flow requirements to support combat crews within the OMs. The MPC ensures all mission requirements are met by coordinating with external agencies and the OC in the CP. Information is received and disseminated through a variety of mediums. The MPC prepares the operations crews for their tours of duty and ensures information flows throughout the system as effectively as possible. Specific information on positional requirements and associated responsibilities are listed below. A CRE Mission Planning Cell is composed of:

One MPC Chief

One Air Surveillance Planner (ASP)

One OC

One Intel Officer/NCO

One ADP Operator

One CTAPS Operator

NOTE: WD, ICT, DST, and EPT personnel from the mission crew may augment the MPC, as necessary.

4.2.3.1. MPC Chief, AFSC 13BXX. The MPC Chief is a CMR MCC and reports to the unit Commander. The MPC Chief directs the activities of the MPC. The MPC Chief will:

4.2.3.1.1. Conduct the weapons portion of the crew briefings.

4.2.3.1.2. Identify specific mission objectives.

4.2.3.1.3. Plan crew emergency action "banjo" procedures.

4.2.3.1.4. Approve scope layout/positional manning.

4.2.3.1.5. Approve the communications plan.

4.2.3.1.6. Approve EMCON, EP, and initial radar plans.

4.2.3.1.7. Act as liaison with the AOC.

4.2.3.1.8. Act as inter-service coordinator.

4.2.3.1.9. Develop the MCC smart pack.

4.2.3.2. OC, AFSC 1C57/91. The OC directs the flow of information into and out of the MPC and serves as a direct link to the MCC. The OC will:

4.2.3.2.1. Maintain appropriate displays and records for briefing purposes.

4.2.3.2.2. Ensure all necessary equipment and supplies are available for operations activities.

4.2.3.2.3. Respond to the needs of the MCC for information.

4.2.3.2.4. Ensure record communications/reports are produced and forwarded IAW Chapters 5 and 6.

4.2.3.2.5. Maintain the operations logbook IAW **chapter 6**.

4.2.3.2.6. Coordinate with job control on equipment outages, advise the MCC of the operational impact, and track ETRO status.

4.2.3.2.7. Ensure COMSEC/classified inventories are completed and issue COMSEC material as required.

4.2.3.2.8. Ensure current weather and winds aloft are reported to the DST for entry into the MCE database.

4.2.3.2.9. Prepare crew change over briefs as directed by the DO.

4.2.3.2.10. Brief the relieving OC.

4.2.3.3. Intelligence Officer/NCO, AFSC 14XX/1NXX. The Intelligence Officer/NCO represents the CAF Headquarters Intelligence Staff and reports to the MPC Chief. The Intel officer/NCO will monitor the VPN and provide updates as required. The Intelligence officer/NCO will:

4.2.3.3.1. Advise the battle staff/MCC on the threat, enemy deployment, employment, tactics, and capabilities of intelligence related activities that could impact the unit's mission.

4.2.3.3.2. Review and analyze intelligence data.

4.2.3.3.3. Maintain current situation maps/displays and intelligence library.

4.2.3.3.4. Coordinate and integrate intelligence data from all sources available.

4.2.3.3.5. Conduct studies of enemy areas and prepare intelligence briefings/reports.

4.2.3.3.6. Receive and relay all in-flight reports and other intelligence items to the AOC and other TACS elements as necessary.

4.2.3.3.7. Complete and forward required intelligence reports.

4.2.3.3.8. Brief/debrief operations crews for intelligence related information gathering.

4.2.3.4. ADP Operator, AFSC 3C0X1. The ADP operator is responsible to the MPC Chief for operating automated data processing equipment in support of CRE operations. Systems may include weather TTY equipment, and/or PC systems. The ADP operator will:

4.2.3.4.1. Extract hard copy weather information.

4.2.3.4.2. Transmit, receive, and distribute, record communications and other data as directed.

4.2.3.4.3. Maintain a current read file of all message traffic received and distributed.

4.2.3.5. ASP, AFSC 1C571. The ASP is responsible to the MPC Chief. The ASP will:

4.2.3.5.1. Determine COMSEC requirements.

4.2.3.5.2. Determine data filter requirements.

4.2.3.5.3. Conduct the surveillance portion of the crew briefing.

4.2.3.5.4. Define the area of responsibility/track production area.

4.2.3.5.5. Define the Identification criteria/develop ID matrix.

4.2.3.5.6. Provide inputs for communications plan.

4.2.3.5.7. Develop surveillance smart packs.

4.2.3.6. CTAPS operator, AFSC 1C53/51. The CTAPS operator is responsible to the MPC Chief. The CTAPS operator will:

4.2.3.6.1. Operate the CTAPS terminal.

4.2.3.6.2. Assist the MPC Chief/WD with breaking out CTAPS messages.

4.2.3.6.3. Be thoroughly trained to initialize and operate the appropriate equipment.

4.2.3.6.4. Extract and produce hard copy message data terminal/CTAPS products.

4.2.3.6.5. Properly mark and safeguard classified message products.

4.2.3.7. WD, AFSC 1C55/71D. The WD is responsible to the MPC Chief and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the WD returns to crew operations. For initial planning, the WD will:

4.2.3.7.1. Brief SPINS/ROE

4.2.3.7.2. Provide inputs to communications plan.

4.2.3.7.3. Coordinate with ADA/Naval air/ external control agencies.

4.2.3.7.4. Breakout ATO/ACO.

4.2.3.7.5. Develop weapons smart pack.

4.2.3.8. ICT, AFSC 1C55/71. The ICT is responsible to the AST and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the ICT returns to crew operations. For initial mission planning, the ICT will:

4.2.3.8.1. Extract data link requirements from the OPTASKLINK.

4.2.3.8.2. Provide inputs for data link plan.

4.2.3.8.3. Brief link participants.

4.2.3.9. EPT, AFSC 1C55/71. The EPT is responsible to the AST and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the EPT returns to crew operations. For initial mission planning, the EPT will:

4.2.3.9.1. Develop the electronic protection plan.

4.2.3.9.2. Develop the EMCON plan.

4.2.3.9.3. Coordinate with radar maintenance to develop the initial radar plan.

4.2.3.10. DST AFSC 1C55/71. The DST is responsible to the AST and assists with initial mission planning. Once initial planning and the first crew briefing is complete, the DST returns to crew operations. For initial mission planning, the DST will:

4.2.3.10.1. Build the initial MCS data base.

4.3. Operations Organization. Execution of the air defense and airspace management activities is accomplished by Operations at the CRE. CRE Operations performs six functions: battle management, weapons control, airspace management, surveillance, data link management, and theater missile defense. The DO is responsible to the unit commander for supervising all CRE operations and operations training activities. The DO is responsible for implementing MCS policy and formulating methods and procedures for the unit operations branch. The DO ensures operations crews are trained and available to meet mission requirements.

4.3.1. Battle Management. The Battle Management function is accomplished through the coordination and integration of four functional areas: weapons, surveillance, data systems, and operations support. The BM positions are the BC, OC, and MCC. BM reviews statuses and higher headquarters guidance and directives, develops courses of action, and then implements the guidance within the assigned AOR. The AOC allocates fighter aircraft and ADA to the CRE either directly or through the CRC to defend the AOR. BM uses these defensive weapons to carry out the assigned mission. The BC normally establishes ground rules for the initial allocation of resources. The MCC continuously coordinates their efforts to eliminate duplication and ensure adequate commitment of assigned weapons against the hostile air threat.

4.3.2. Weapons. The operations weapons section is comprised of the MCC, ADAFCO (when assigned), and WD. The MCC manages the section and employs the assigned weapons systems to cover the threat. The MCC directs the employment of and allocates fighter resources to WDs. When subordinate to the AOC, the CRE may direct the employment of and assign weapons systems to other C^2 agencies. ADA assets and Army missile system employment will be coordinated and directed through the ADAFCO. The WDs provide control and radar services to aircraft within the AOR. WDs will be trained for any and all types of missions to include OCA/DCA, air interdiction, CAS, reconnaissance, airlift, EA, rescue, air refueling, special operations, and emergency aircraft assistance. WDs will be trained to operate from the OMs and the AN/TPS-75 radar van. Weapons section positional requirements and associated responsibilities are contained in para 4.4. The CRE weapons section is responsible to the MCC for the execution of offensive and defensive air activities and airspace management within its assigned AOR.

4.3.3. Surveillance. The operations surveillance section is comprised of the MCC, AST, ST, and EPT. The AST is responsible to the MCC for the detection, tracking, identification and reporting of airborne objects within the AOR. Paragraph **4.4.** contains specific surveillance section positional requirements

and the associated responsibilities. The air surveillance section is responsible for the prompt and accurate display of surveillance data. Additionally, proper reporting, display and evaluation procedures are necessary for effective centralized direction and response to a changing tactical situation. Air surveillance includes determining the presence of aircraft in the air mass, following their movement, identification, height measurement, display, telling, and recording air surveillance data.

4.3.4. Data Systems. Data systems digitally displays and transfers battle management data and commands. This section maintains the operation of the MCE computer, communications systems, and MCE supporting databases. It is comprised of the AST, DST, and ICT. The CRE uses digital interface systems to provide the AOC and other data link capable assets within the theater a recognizable air picture. The DST is responsible to the AST for monitoring overall MCS equipment status and establishing/maintaining high speed digital data communications networks to enable users to view a near-real-time picture. Theater users may be Air Force, Army, Navy, Marine Corps, or allied nations. When more than one service or nation is involved, data systems provides the information to establish JTAO. The CRE may be tasked to support the data link needs of the AOC/CRC. Paragraph **4.4.** contains data systems positional requirements and associated responsibilities.

4.4. Operations Crew's Duties and Responsibilities. The positional descriptions below highlight the CRE crew duties and responsibilities. A CRE crew is composed of:

One BC

One OC

One MCC

Two WDs

One AST

Two STs

One EPT

One ICT

One DST

4.4.1. BC. The BC directs the battle staff to:

4.4.1.1. Identify air traffic within the assigned AOR IAW theater directives.

4.4.1.2. Control assigned offensive and defensive missions IAW theater ROE.

4.4.1.3. Commit allocated weapons to counter the hostile threat IAW theater ROE.

4.4.1.4. Determine alert status and disseminate this information for all air defense systems under operational control of the BC.

4.4.1.5. Ensure accurate and timely air situation data, theater action results, equipment, and weapons status reports are provided to the AOC.

4.4.1.6. Provide pre/post-mission briefings to subordinate/lateral elements.

4.4.2. OC, AFSC 1C55/7. The OC is responsible for ensuring the BC is up-to-date on the current operational situation. The OC is also responsible for ensuring the MCC is aware of site configurations

and pertinent information (defense conditions, MOPP levels, etc.). This highly qualified senior NCO will:

4.4.2.1. Ensure messages/reports are produced and forwarded IAW **chapter 5** and 6

4.4.2.2. Update operations on support status as it impacts the mission.

4.4.2.3. Ensure all necessary supplies and equipment are available for operations activities.

4.4.2.4. Maintain appropriate displays and records for briefing purposes.

4.4.2.5. Provide ops situation update briefings to the BC.

4.4.2.6. Manage/supervise the operation of the ADP system(s) (CTAPS, UGC-144, PCs, etc.).

4.4.2.7. Direct operations COMSEC and classified material inventories.

4.4.2.8. Maintain the Operations Logbook IAW Chapter 6.

4.4.2.9. Resolve operations crew and personnel issues as required.

4.4.2.10. Coordinate with job control on equipment outages and track ETROs.

4.4.2.11. Serve as the single point of contact for reporting all MCS equipment problems or outages to Job Control. Job Control notifies necessary specialists and opens a JCN, if necessary. The OC ensures JCNs are obtained from Job Control and entered into the ops logbook. OC advises the AST and MCC of operational impact.

4.4.2.12. Brief the relieving OC.

4.4.3. MCC, AFSC 13B3D. The MCC is responsible to the BC for the overall supervision, training, and crew performance during his assigned tour of duty. The MCC must be adept in evaluating the air situation, determining appropriate theater actions, and coordinating with the BC to ensure the most effective flow of friendly air traffic. The MCC coordinates the unit's operations interface and coordination requirements with other TACS elements and services. The MCC is the CRE's primary interface with the CRC/AOC and, in a joint environment, monitors and uses the ICN to pass time sensitive command information. The MCC will:

4.4.3.1. Conduct mission crew briefings prior to going on duty.

4.4.3.2. Coordinate with other agencies engaged in air operations.

4.4.3.3. Disseminate air defense warnings to all lateral and subordinate units.

4.4.3.4. Understand the TACS system capabilities, associated radars, and the capabilities of other C^2 systems, e.g., ABCCC, AWACS, Joint STARS, CRC, etc.

4.4.3.5. Coordinate equipment maintenance schedules.

4.4.3.6. Supervise the surveillance, weapons, and data systems sections. Ensure coordination and information flow within operations.

4.4.3.7. Submit AF Form 4145, Daily Activity Log, at the end of each tour of duty (see **chapter 6**).

4.4.3.8. Ensure that operational checks are made on all equipment at the beginning of the assigned tour and outages are reported to the AST.

4.4.3.9. Direct data base loads and approve MCS system changes.

4.4.3.10. Advise the duty AST of any post-mission data reduction requirements.

4.4.3.11. Commit air defense weapons to counter the threat.

4.4.3.12. Monitor WDs to ensure effective mission accomplishment and flight safety.

4.4.3.13. Assign missions to WDs

4.4.3.14. Assign radio frequencies/nets to specific consoles.

4.4.3.15. Coordinate interceptor fighter scrambles and airborne orders.

4.4.3.16. Direct operations transition during degraded operations.

4.4.3.17. Assign targets to the ADAFCO for engagement.

4.4.3.18. Coordinate with the AST for systems changes

4.4.3.19. Thoroughly brief the relieving MCC.

4.4.4. ADAFCO. When assigned, the ADAFCO is responsible to the MCC for coordinating air defense of designated facilities/areas and for coordinating and monitoring the command, track, and fire unit information exchange between the CRE and the AADCP. The ADAFCO will:

4.4.4.1. Have a complete knowledge of AF/Army ADA interface operations.

4.4.4.2. Know applicable ADA weapons capabilities and current status of assigned ADA systems.

4.4.4.3. Inform MCC and WDs of changes in ADA unit locations and ADA unit status that will effect changes in MEZ.

4.4.4.4. Inform the MCC of Army recommended changes in weapons control status.

4.4.4.5. Serve as single point of interface between senior AADCP and the CRE when back-up procedures are implemented.

4.4.4.6. Direct the senior AADCP to engage all tracks assigned to Army ADA by the MCC.

4.4.4.7. Disseminate air defense warnings, weapons alert statuses and other operational control data to and from the AADCP, as required.

4.4.4.8. Coordinate with the AST to establish critical tracks reported by fire units that are not being digitally reported by the AADCP.

4.4.4.9. When authorized by the MCC, transmit appropriate weapons commands to the senior AADCP to ensure effective employment of ADA and air defense resources.

4.4.4.10. Have a working knowledge of MCE switch actions and CRE communications.

4.4.5. WD, AFSC 1C55/71D. The WD is responsible to the MCC for the control of aircraft within the CRE AOR. The WD will:

4.4.5.1. Understand the TACS system capabilities, associated radars, and the capabilities of other C^2 systems, i.e., ABCCC, AWACS, Joint STARS, CREs, etc.

4.4.5.2. Be familiar with the performance characteristics, fire control systems, and ordnance loads for all assigned weapons systems.

4.4.5.3. Be skilled in the WD disciplines to include intercept positioning, refueling operations, offensive mission support, and OCA/DCA control.

4.4.5.4. Keep the MCC informed of all changes to mission requirements, mission results, and situations that may affect mission completion or flight safety.

4.4.5.5. Inform aircrews of theater information that may affect mission accomplishment.

4.4.5.6. Forward PIREPs and BDA reports through appropriate channels to the AOC.

4.4.5.7. Take all necessary actions to maintain flight safety and avoid incidents of fratricide.

4.4.5.8. Provide navigational assistance and emergency assistance, as required/requested.

4.4.5.9. Complete weapons documentation for each tour of duty or at the completion of each mission, as directed by the MCC (see **chapter 6**).

4.4.5.10. Use authentication as required.

4.4.5.11. Be qualified to control from the AN/TPS-75 van.

4.4.5.12. Be aware of existing and forecasted weather for both AOR and recovery bases.

4.4.5.13. Accomplish Mode IV checks on all assigned aircraft IAW theater directives.

4.4.5.14. Provide change over briefing to relieving WD.

4.4.6. AST, AFSC 1C571. The AST designated for each duty shift is responsible to the MCC for accomplishment of surveillance functions and for the supervision of all surveillance and data systems personnel. The AST will:

4.4.6.1. Direct track production tasks while coordinating track production tasks with other radar elements to establish a recognizable air picture.

4.4.6.2. Supervise Link Management and the detection, tracking, and identification of all air traffic within the AOR.

4.4.6.3. If required/requested, ensure air surveillance data is voice told from the OM/AN/TPS-75 van to higher, lateral, and subordinate units. Voice tell will normally be IAW prescribed JTAO format.

4.4.6.4. Ensure all tracks are properly identified.

4.4.6.5. Brief surveillance personnel on current or anticipated operations, equipment, and communications operational status.

4.4.6.6. Understand the TACS system capabilities and limitations, associated radars, and the capabilities of other service/allied C^2 systems and equipment limitations, i.e., ABCCC, AWACS, Joint STARS, CRC, etc.

4.4.6.7. Assign surveillance AOR to each ST.

4.4.6.8. Ensure all surveillance/identification personnel are aware of mission objectives.

4.4.6.9. Maintain current meteorological information, i.e., information on anomalous propagation, thunderstorms, or unusual weather conditions are called to the attention of operations personnel..

4.4.6.10. Notify the MCC and higher headquarters when EA is observed or reported.

4.4.6.11. Coordinate with CRC ASO to maintain proper site registration.

4.4.6.12. Ensure all MCS equipment problems or outages are passed to the OC. The OC in turn reports information to Job Control and advises MCC/AST of operational impact.

4.4.6.13. Ensure emergency points for downed aircraft are displayed.

4.4.6.14. Ensure all final drop track actions.

4.4.6.15. Utilize the TSN to coordinate maintenance of recognizable air picture.

4.4.6.16. Recommend threat mode changes to MCC when required.

4.4.6.17. Ensure missile “profile test” parameters are entered as briefed by MCC.

4.4.6.18. Advise the MCC of surveillance limitations as they occur.

4.4.6.19. Ensure jam strobes of the applicable types are displayed after coordination with the EPT. When the system performs the detection and display of jamming, the AST will ensure the jam display is correct.

4.4.6.20. Direct the EPT to coordinate with other unit EPTs to determine if jamming is occurring at their location.

4.4.6.21. Enter and update jammer points (fixes) at suspected emitter locations.

4.4.6.22. When correlation can be determined, enter a track of the appropriate identity in place of the jammer points (fixes).

4.4.6.23. Notify MCC when “Set EMCON” FFS blinks indicating a possible missile in the system.

4.4.6.24. Thoroughly brief the relieving AST.

4.4.7. ST, AFSC 1C53/51. The ST is responsible to the AST for track detection, initiation, maintenance, and identification within the assigned AOR. The number of STs employed will depend on specific taskings. The ST will:

4.4.7.1. Be constantly alert for new tracks that appear within the assigned AOR.

4.4.7.2. Report all unusual scope presentations (EA, anomalous propagation, weather, etc.) to the AST and adjust console to obtain the best possible presentation.

4.4.7.3. Know radar capabilities and limitations.

4.4.7.4. Perform voice tell from the AN/TPS-75 van and/or as directed by AST IAW attachment 2.

4.4.7.5. Notify the AST of all tracks that cannot be identified.

4.4.7.6. Notify the AST of all unusual incidents of identification difficulties.

4.4.7.7. Enter ACO information into the data base.

4.4.7.8. Ensure Mode IV checks are accomplished IAW theater directives.

4.4.7.9. Ensure proper identification has been assigned to tracks.

4.4.7.10. Coordinate with all flight plan agencies for required data.

4.4.7.11. Preplot and correlate friendly aircraft that are not in the ATO based upon available flight plan data.

4.4.7.12. Coordinate identification activities with adjacent air traffic control facilities.

4.4.7.13. Disseminate flight plan information to adjacent and subordinate units.

4.4.7.14. Thoroughly brief the relieving ST on the current operational situation.

4.4.7.15. Correlate data from the adjacent sites to ensure track continuity.

4.4.8. EPT, AFSC 1C55/71 SEI 270. The EPT is responsible to the AST for coordinating EP functions. The EPT will:

4.4.8.1. Recommend EMCON measures and levels.

4.4.8.2. Take appropriate actions to negate the effects of anomalous propagation, thunderstorms, unusual weather conditions, and EA.

4.4.8.3. Complete and submit applicable reports IAW with Chapter 5.

4.4.8.4. Coordinate with the AST to submit required data for EA reports when jamming interference is encountered.

4.4.8.5. Coordinate with other units and agencies to identify and locate jammers and sources of interference.

4.4.8.6. Work closely with radar maintenance to ensure optimum levels of radar performance.

4.4.8.7. Inform the AST when EA is experienced.

4.4.8.8. Coordinate with the ASO/AST CRE to accomplish a correlation check with the FAA or data registration with the theater designated senior radar element.

4.4.8.8.1. Evaluate remote radar data for correlation and ensure data is

received on all tracks within the area of interest.

4.4.8.8.2. Ensure the single word PREP assessment is recorded in the OC logbook.

4.4.8.9. Thoroughly brief the relieving EPT.

4.4.9. ICT, AFSC 1C55/71. The ICT is responsible to the AST for establishing data links and monitoring data link effectiveness. The ICT will:

4.4.9.1. Conduct data link operations as directed.

4.4.9.2. Utilize the DCN to coordinate with other data link agencies.

4.4.9.3. Perform initial data link equipment checkout.

4.4.9.4. Coordinate the designation and use of frequencies/channels assigned to interface data links and voice coordination nets.

4.4.9.5. Implement changes in interface configuration as directed.

4.4.9.6. Implement data link filters as directed.

4.4.9.7. Monitor track exchange operations over the data links.

4.4.9.8. Recommend changes in data link configuration to the AST.

4.4.9.9. Thoroughly brief the relieving ICT.

4.4.10. DST, AFSC 1C55/71. The DST is responsible to the AST for executing and monitoring the status of the system. The DST is the MCE systems expert and ensures the system is capable of supporting battle management, weapons, air surveillance, and data link requirements. The DST, in concert with the MCC and WDs, ensures ATO information is correct and up-to-date in the MCE computer data base system. The DST will:

4.4.10.1. Plan and coordinate the initial build of the MCE database.

4.4.10.2. Load data base, ensure system configuration meets operational requirements.

4.4.10.3. Monitor PM&T function and report equipment discrepancies to the AST.

4.4.10.4. If required, assist maintenance technicians in troubleshooting equipment problems.

4.4.10.5. Perform post mission data reduction as directed by the AST

4.4.10.6. Brief operations crew on equipment status.

4.4.10.7. Ensure the R/RU and the Printer Unit are operated IAW Chapter 6 and unit directives.

4.4.10.8. Coordinate all RIMM read/write activities.

4.4.10.9. Manage data base and system configuration.

4.4.10.10. Coordinate system reset/IPL as directed by the AST.

4.4.10.11. Recommend and configure system as required.

4.4.10.12. Brief the relieving DST.

Chapter 5

TACTICAL DATA REPORTING

5.1. General. Display, recording, and dissemination of air surveillance data will occur as a result of data link operations within the MCS net. MCS manning and equipment do not facilitate manual tell or plotting. The primary method of submitting reports will be through CTAPS or other automated system; voice will serve as a backup method.

5.2. Data Link Operations.

5.2.1. Link Maintenance. Links must be continuously maintained and re-established as soon as practicable, if lost. The controlling agency should be notified of the loss of the link.

5.2.2. Termination. Links should normally be terminated only after receiving operational release from the appropriate controlling authority.

5.2.3. Emergency Termination. When possible, the controlling authority should be notified if emergency termination of a link becomes necessary or likely.

5.3. Joint and Air Force Reporting. Forward reports, such as those listed below, by voice or TTY circuit to the appropriate higher echelon, as required by appropriate directives. Joint Chiefs of Staff publications, Air Force Instructions, and appropriate OPORDs/Operations Plans (OPLANs) establish reporting requirements. The following are representative of reports that may be required; this is not all inclusive and is dependent on mission requirements or theater directives (reference Air Force Pamphlet [AFP] 102-2): (Use USMTF, where applicable.)

5.3.1. SITREP

5.3.2. Operational Report (OPREP)

5.3.3. Status of Resources and Training System (SORTS)

5.3.4. Emergency Action Reports

5.3.5. Nuclear, Biological, and Chemical (NBC) Reports

5.3.6. Spectrum Interference Resolution System (SIRS Reports)

5.3.7. TACS Facility Status Reports

5.3.8. Weapons Status Reports

5.3.9. Tactical Action Data Reports

5.3.10. In-Flight/Post Attack Reports

5.3.11. Tanker In-Flight Reports

5.3.12. Intelligence Reports

5.3.13. Downed Pilot Reports

Chapter 6

ADMINISTRATIVE REQUIREMENTS

6.1. General. This chapter establishes the requirements and provides guidance for the maintenance of required publications, records, forms, and documentation.

6.2. Operations Information File (OIF). The OIF is required to ensure that information essential to the conduct of operations or emergency conditions is available. Procedures for the OIF are contained in applicable Major Command directives.

6.3. Operations Logbook. The DO will ensure that the Operations Logbook is properly maintained. The Operations logbook is the official record of events that occurred during any live operation, System Training Exercise (STE), or data link with external agencies. The purpose is to maintain an accurate and detailed record of all significant events pertaining to operations. Of primary importance are events that may result in subsequent investigations. The following procedures apply for all logbooks.

6.3.1. Maintain the logbook in a permanently bound book such as a ledger or a journal.

6.3.2. Classify the logbook SECRET since it contains information concerning actual or exercise alert warnings and states of preparedness, system capabilities, and other classified data. The logbook will be marked, handled, and stored IAW Department of Defense (DoD) Directive 5200.1R/AFI 31-402.

6.3.3. Make entries in the logbook in black or blue ink. Erasures will not be made. Correct errors in entries by lining through the entry, placing individual's initials at the end of the entry, and re-entering correct information on the next line.

6.3.4. Open the logbook at 0001Z or at the beginning of the duty day and close it at 2400Z or the end of the duty day. Use ZULU time for all entries.

6.3.5. If a change in ZULU day occurs during the tour of duty , close the logbook and reopen it at that time.

6.3.6. When opening and closing the logbook for the ZULU day or changing crews, include the operational crew identifier in the sign-on/off duty line.

6.3.7. It is <u>not necessary</u> to record information that has already been noted in another authorized document or has been recorded unless it is deemed appropriate for clarity and understanding.

6.3.8. The following entries are required, but not limited to:

6.3.8.1. Time of each entry (using ZULU time).

6.3.8.2. The MCC will sign at the beginning and end of the tour of duty (indicating the time on/off duty with a legible rank and signature). The MCC's signature certifies that all entries are accurate and reflect a complete record of the tour of duty.

6.3.8.3. Call sign of unit(s) to which information is passed or from which information is received.

6.3.8.4. Initials of both individuals passing and receiving information.

6.3.8.5. Verbal orders or instructions that deviated from standard operating procedures. Include any authentication used and if a reply was appropriate.

6.3.8.6. R/RU/tape data (see para **6.4.3.**).

6.4. Voice Tape Recording. Tape recording of live missions is essential to provide necessary information concerning aircraft accidents, declared emergencies, and/or any event resulting in a subsequent investigation.

6.4.1. General. Various types of tape recorders are provided to TACS elements to satisfy the tape recording requirements. Primary recorders used by the TACS are the R/RU and various cassette voice tape recorders. Units are not limited to use of the afore mentioned recorder.

6.4.2. Priorities for Recording Assignments.

6.4.2.1. The DO determines which positions are to be recorded. As a minimum, record air-to-ground channels and channels used to routinely receive alert action messages to the maximum extent possible. The recording capability of each TACS element depends on the condition and type of recording equipment.

6.4.2.2. The priority of recording transmissions will be:

6.4.2.2.1. Air/ground guard.

6.4.2.2.2. Air/ground primary and discreet frequencies.

6.4.2.2.3. Air/ground common.

6.4.2.2.4. Other air/ground frequencies.

6.4.2.2.5. External point-to-point involving aircraft control.

6.4.2.2.6. C^2 lines.

6.4.2.3. The priority of recording assignment by position will be:

6.4.2.3.1. Weapons

6.4.2.3.2. SD/WD (if possible)

6.4.2.3.3. MCC/BC

6.4.2.3.4. ASO/AST

6.4.2.3.5. ST

NOTE: When deployed, these priorities may be modified as directed by OPLAN/OPORD.

6.4.3. Operating Responsibilities and Procedures.

6.4.3.1. The AST normally prepares the recorder and will:

6.4.3.1.1. Load and replace recording tapes.

6.4.3.1.2. Ensure the tape recorder is operational at the beginning of each tour of duty.

6.4.3.1.3. Perform checks of recorder operations throughout the tour of duty.

6.4.3.1.4. Ensure the following is annotated in the operations logbook at the beginning of each tour of duty.

6.4.3.1.4.1. Tape number.

6.4.3.1.4.2. Start number point, if applicable (for voice cassette recorder).

6.4.3.1.4.3. Date and ZULU time.

6.4.3.1.4.4. Name of individual changing tape (when applicable).

6.4.3.1.5. Mark each complete tape with the following:

6.4.3.1.5.1. Tape number.

6.4.3.1.5.2. Period covered by the tape.

6.4.3.1.6. Ensure completed tapes are secured and properly stored.

6.4.3.1.7. Notify the CRC ASO/CRE MCC of recorder malfunctions.

6.4.3.1.8. Ensure tapes are marked, handled, and stored IAW DoD Directive/5200.1R/AFI 31-402.

6.4.3.2. The AST monitors tape recordings, to include quality of recordings, correct tape markings, storage, and supply.

6.4.4. Tape Retention. Retain recording tapes for 48 hours. Recording tapes containing information concerning an aircraft accident/incident will be identified, marked, and retained until the incident is resolved or for a minimum of six months. The MCC or higher authority may direct that a tape or tapes be retained for a specific reason. In such a case, mark the tape appropriately with the requester's name, rank, duty title, and organization, and disposition instructions.

6.5. COMSEC Requirements. The MCC ensures required COMSEC materials (Voice Secure Callsign Listing, codes and authenticators) are available to operations crews. COMSEC material not maintained in the OIF will be signed out from the unit COMSEC custodian. Issue, protection, and disposition of COMSEC material will be IAW DoD Directive 5200.1R, Air Force Instruction (AFI) 31-402, and Air Force Cryptographic Operational General (AFKAG)-1.

6.6. Operations Checklist and Quick Reference Guides. Operations checklists are listings of steps that must be taken in sequence to respond properly to a particular event. All steps in a checklist must normally be taken before the desired response is complete. Quick reference guides are similar to checklists but do not need sequential steps and can contain charts, diagrams, telephone listings, and so forth, in any format or arrangement. Operations checklists listed below by position will be available as shown before declaring the CRC/CRE operational or limited operational during peacetime operations. During wartime operations, the CRC/CRE will not delay its activation of operation to satisfy this requirement; however, checklists and quick reference guides should be available for operator use as soon as possible after declaring the CRC/ CRE operational or limited operational. The DO directs the development of additional checklists and quick reference guides, as needed.

6.6.1. Administrative Requirements. Prepare and maintain operations checklists IAW the following administrative guidelines.

6.6.1.1. Standardize the size of checklists and binders at each unit.

6.6.1.2. The first page of each checklist binder will contain a sheet showing date reviewed and initials of the reviewer. Signature of reviewer signifies checklists are current. Mark checklists according to DoD Directive 5200.1-5/AFI 31-402 security instructions.

6.6.1.3. The first checklist in any binder/holder will always be the “Aircraft Emergency” checklist, bordered in red.

6.6.1.4. When checklists are combined with other types of operational guides or documents, such as locally developed handbooks, place the checklists in the front of the binder and separated from other material.

6.6.1.5. Each unit will develop internal review procedures to ensure only current checklists are in use and verified in writing. Review all checklists at least annually.

6.6.1.6. Personnel manning an operations position must have in their possession a packet of checklists provided below.

6.6.1.6.1. MCC:

6.6.1.6.1.1. Aircraft emergency

6.6.1.6.1.2. Emergency equipment shutdown/anti-radiation missile (ARM) shutdown

6.6.1.6.1.3. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.1.4. Minimum operational requirements

6.6.1.6.1.5. Equipment acceptance checklist

6.6.1.6.1.6. Equipment failure reporting

6.6.1.6.1.7. Crew positional changeover

6.6.1.6.1.8. OCU setup/shutdown

6.6.1.6.1.9. Pre-STE/Joint System Training Exercise (JSTE)

6.6.1.6.1.10. Post-STE/JSTE

6.6.1.6.1.11. Location of permanent echoes/radar alignment check

6.6.1.6.1.12. Current ROE

6.6.1.6.2. WD:

6.6.1.6.2.1. Aircraft emergency

6.6.1.6.2.2. Emergency equipment shutdown/anti-radiation missile (ARM) shutdown

6.6.1.6.2.3. Minimum operational requirements

6.6.1.6.2.4. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.2.5. Equipment acceptance checklist

6.6.1.6.2.6. Equipment failure reporting

6.6.1.6.2.7. Crew positional changeover

6.6.1.6.2.8. MCE Operator Console Unit (OCU) setup/shutdown

6.6.1.6.2.9. HAVE QUICK operations

6.6.1.6.2.10. Pre-STE/JSTE

6.6.1.6.2.11. Post-STE/JSTE

6.6.1.6.2.12. Location of permanent echoes/radar alignment check

6.6.1.6.2.13. TADIL-C operations

6.6.1.6.2.14. R/RU operations

6.6.1.6.2.15. Current ROE

6.6.1.6.3. SD:

6.6.1.6.3.1. Aircraft emergency

6.6.1.6.3.2. Emergency equipment shutdown/ARM shutdown

6.6.1.6.3.3. Minimum operational requirements

6.6.1.6.3.4. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.3.5. Equipment acceptance

6.6.1.6.3.6. Equipment failure reporting

6.6.1.6.3.7. Positional changeover

6.6.1.6.3.8. OCU setup/shutdown

6.6.1.6.3.9. HAVE QUICK operations

6.6.1.6.3.10. Pre-STE/JSTE

6.6.1.6.3.11. Post-STE/JSTE

6.6.1.6.3.12. Location of permanent echoes/radar alignment check

6.6.1.6.3.13. TADIL-C operations

6.6.1.6.3.14. R/RU operations

6.6.1.6.3.15. Current ROE

6.6.1.6.4. ASO/AST:

6.6.1.6.4.1. Aircraft emergency

6.6.1.6.4.2. Emergency equipment shutdown/ARM shutdown

6.6.1.6.4.3. OCU setup/shutdown

6.6.1.6.4.4. Minimum operational requirements

6.6.1.6.4.5. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.4.6. TADIL-A establishment/termination

6.6.1.6.4.7. TADIL-B establishment/termination

6.6.1.6.4.8. TADIL-C establishment/termination

6.6.1.6.4.9. Link-1 establishment/termination

6.6.1.6.4.10. ATDL establishment/termination

6.6.1.6.4.11. Equipment acceptance checklist

6.6.1.6.4.12. Equipment failure reporting

6.6.1.6.4.13. Location of permanent echoes/radar alignment check

6.6.1.6.4.14. Pre-STE/JSTE

6.6.1.6.4.15. Post-STE/JSTE

6.6.1.6.4.16. Positional changeover

6.6.1.6.5. DST/ST:

6.6.1.6.5.1. Aircraft emergency

6.6.1.6.5.2. Emergency equipment shutdown/ARM shutdown

6.6.1.6.5.3. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.5.4. Equipment acceptance checklists

6.6.1.6.5.5. Equipment failure reporting

6.6.1.6.5.6. OCU setup/shutdown

6.6.1.6.5.7. Location of permanent echoes/radar alignment

6.6.1.6.5.8. Positional changeover

6.6.1.6.5.9. Pre-STE/JSTE

6.6.1.6.5.10. Post-STE/JSTE

6.6.1.6.6. ICT:

6.6.1.6.6.1. Aircraft emergency

6.6.1.6.6.2. Emergency equipment shutdown/ARM shutdown

6.6.1.6.6.3. Equipment acceptance checklist

6.6.1.6.6.4. Equipment failure reporting

6.6.1.6.6.5. Minimum operational requirements

6.6.1.6.6.6. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.6.7. TADIL-A establishment/termination

6.6.1.6.6.8. TADIL-B establishment/termination

6.6.1.6.6.9. TADIL-C establishment/termination

6.6.1.6.6.10. Link-1 establishment/termination

6.6.1.6.6.11. ATDL establishment/termination

6.6.1.6.6.12. OCU setup/shutdown

6.6.1.6.6.13. Positional changeover

6.6.1.6.6.14. HAVE QUICK operations

6.6.1.6.6.15. Location of permanent echoes/radar alignment check

6.6.1.6.6.16. Pre STE/JSTE

6.6.1.6.6.17. Post STE/JSTE

6.6.1.6.7. EPT:

6.6.1.6.7.1. Aircraft emergency

6.6.1.6.7.2. Emergency equipment shutdown/ARM shutdown

6.6.1.6.7.3. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.7.4. Equipment failure reporting

6.6.1.6.7.5. Minimum operational requirements (AN/TPS-75)

6.6.1.6.7.6. UYQ-27 setup/shutdown

6.6.1.6.7.7. UPA-59 setup/shutdown

6.6.1.6.7.8. EA reporting

6.6.1.6.7.9. Location of permanent echoes/radar alignment check

6.6.1.6.7.10. Positional changeover

6.6.1.6.7.11. Radar Continuous Evaluation (RCE) (Periodic Radar Evaluation Program (PREP)) check

6.6.1.6.7.12. Pre STE/JSTE

6.6.1.6.7.13. Post STE/JSTE

6.6.1.6.8. AN/TPS-75 Operations Checklist:

6.6.1.6.8.1. Aircraft emergency

6.6.1.6.8.2. Emergency equipment shutdown/ARM shutdown

6.6.1.6.8.3. Minimum operational requirements

6.6.1.6.8.4. Responses to emergency actions, e.g., fire, bomb threat, LERTCON, THREATCON, MOPP, ARM threat, etc.

6.6.1.6.8.5. Equipment acceptance checklist

6.6.1.6.8.6. Crew positional changeover

6.6.1.6.8.7. Equipment failure reporting

6.6.1.6.8.8. HAVE QUICK operations (ARC-164).

6.6.1.6.8.9. UYQ-27 setup/shutdown

6.6.1.6.8.10. UPA-59 setup/shutdown

6.6.1.6.8.11. ARC 164 setup/shutdown

6.6.1.6.8.12. RCE (PREP) check

6.6.1.6.8.13. Location of permanent echoes/radar alignment check

6.6.1.6.8.14. R/RU operations

6.6.1.6.8.15. Pre-STE/JSTE

6.6.1.6.8.16. Post-STE/JSTE

6.6.2. Quick Reference Guides. The following quick reference guides are listed as a reference, but are not required. The DO will designate additional checklists and quick reference guides to be used.

6.6.2.1. Adaptation planning (ASO/T, DST and ICT)

6.6.2.2. Filter planning (ASO/T, DST, and ICT)

6.6.2.3. Airspace local procedures (weapons positions)

6.6.2.4. Aircraft performance characteristics and armament configurations (weapons positions)

6.6.2.5. Refueling capabilities of tanker and receivers (weapons positions)

6.7. Remote Radar Data. See ACC Supplement 1 to AFI 13-101, Evaluation of Ground Radar Systems.

6.8. Disposition of Documentation. All forms completed during the tour of duty will be appropriately marked and filed together chronologically by date. Maintain forms a minimum of 60 days and dispose of them IAW AFM 37-139. Dispose of information pertaining to an aircraft accident IAW AFM 37-139.

6.9. Forms Requirements. DOs ensure forms are readily available to meet operational requirements. Two forms prescribed by this regulation are required and will be utilized to support TACS operations: AF Form 4145 and AF Form 4146.

6.9.1. AF Form 4146, Aircraft Missions. Use the aircraft mission form to brief missions, to record mission results, and to serve as a record of unit control activities. WDs use the form for any and all control activities conducted and forward it to the SD/CRE MCC for review and attachment to AF Form 4145.

6.9.2. AF Form 4145, Daily Activity Log. The MCC is responsible for the daily activity log. The form is required to be properly filled out at the completion of each operations crew shift and is forwarded to the DO for approval. The daily activity log provides a complete summary of all crew operations for a particular shift and is an important tool for data correlation and analysis.

6.10. Prescribed Forms.

6.10.1. AF Form 4146, Aircraft Missions.

6.10.2. AF Form 4145, Daily Activity Log.

MARVIN R. ESMOND, Lt General, USAF
DCS/Air and Space Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 13-1, *Theater Air Control System,* 11 May 1995

Public Law 104-13, *Paperwork Reduction Act of 1995,* 22 May 1995

AFI 31-402, *Security Classification of Airborne Sensor Imagery and Imagery Systems*

AF Manual 37-139, *Records Disposition Schedule*

Air Force Tactics, Techniques, and Procedures 3-1, Volume 26, *Tactical Employment Theater Air Control System*

ACC Supplement 1 to AFI 13-101, *Evaluation of Ground Radar Systems*

Abbreviations and Acronyms

AADC—Area Air Defense Commander

AADCP—Army Air Defense Command Post

ABCCC—Airborne Battlefield Command and Control Center

ACO—Airspace Control Order

ADA—Air Defense Artillery

ADAFCO—ADA Fire Coordination Officer

ADP—Automated Data Processing

AF—Air Force

AFI—Air Force Instruction

AFM—Air Force Manual

AFP—Air Force Pamphlet

AFSC—Air Force Specialty Code

ANG—Air National Guard

AOC—Aerospace Operations Center

AOR—Area of Responsibility

ARM—Anti-Radiation Missile

ASO—Air Surveillance Officer

AST—Air Surveillance Technician

ATDL—Army Tactical Data Link

ATO—Air Tasking Order

AWACS—Airborne Warning and Control System

BC—Battle Commander

BDA—Battle Damage Assessment

BM—Battle Management

BSC—Battle Staff Coordinator

C—2 Command and Control

C—4I Command, Control, Communications, Computer, and Intelligence

CAF—Combat Air Forces

CAP—Combat Air Patrol

CAS—Close Air Support

CMR—Combat Mission Ready

COMSEC—Communications Security

CP—Command Post

CRC—Control and Reporting Center

CRE—Control and Reporting Element

CSF—Chief of Security Forces

CTAPS—Contingency Theater Automated Planning System

DCA—Defensive Counter Air

DCN—Data Control Net

DO—Director of Operations

DoD—Department of Defense

DP—Disaster Preparedness

DST—Data System Technician

EA—Electronic Attack

EMCON—Emission Control

EP—Electronic Protection

EPT—Electronic Protection Technician

ETRO—Estimated Time to Return to Operational

GEOREF—Geographical Reference

GTACS—Ground Theater Air Control System

IAW—In Accordance With

ICN—Interface Control Net

ICT—Interface Control Technician

ICU—Interface Control Unit

ID—Identification

IFF/SIF—Identification Friend from Foe/Selective Identification Feature

IPL—Initial Program Load

JCN—Job Control Number

JFACC—Joint Force Air Component Commander

Joint STARS—Joint Surveillance Target Attack Radar System

JSTE—Joint System Training Exercise

JTAO—Joint Tactical Air Operations

Lat/Long—Latitude/Longitude

MCC—Mission Crew Commander

MCE—Modular Control Equipment

MCS—Modular Control System

MEZ—Missile Engagement Zone

MOPP—Mission-Oriented Protective Posture

MPC—Mission Planning Cell

NATO—North Atlantic Treaty Organization

NBC—Nuclear, Biological, Chemical

NCS—Net Control Station

OC—Operations Coordinator

OCA—Offensive Counter Air

OCU—Operator Console Unit

OIF—Operations Information File

OM—Operations Module

OPLAN—Operations Plan

OPORD—Operation Order

OPTASKLINK—Operational Tasking Data Link

PC—Personal Computer

PIREP—Pilot Report

PM&T—Performance Monitor and Test

PREP—Periodic Radar Evaluation Program

QRP—Quick Response Package

R/RU—Recorder/Reproducer Unit

RCE—Radar Continuous Evaluation

RIMM—Removable Interchangeable Media Module

ROE—Rules of Engagement

SAM—Surface-to-Air Missile

SAR—Search and Rescue

SD—Senior Director

SEI—Special Experience Identifier

SITREP—Situation Report

SPINS—Special Instructions

ST—Surveillance Technician

STE—System Training Exercise

SYSCON—System Control

TACS—Theater Air Control System

TADIL—Tactical Data Link

TDC—Track Data Coordinator

TMD—Theater Missile Defense

TRI-TAC—Tri-Service Tactical Communications System

TSN—Track Supervision Net

TTY—Teletype

UMD—Unit Manning Document

USMTF—US Message Text Format

UTC—Unit Type Code

VCSL—Voice Call Sign Listing

VPN—Voice Production Net

WD—Weapons Director

Attachment 2

VOICE TELL FORMATS

A2.1. New Track Report. Use these formats for voice tell of air surveillance data with those strategic air defense units not capable of data link operations. Formats are IAW AFP 102-2, Joint User Handbook for Message Text Formats (Chapter 3, Annex 162, Track/Point Report). Specific line numbers to be used will be coordinated during mission planning or briefed prior to the start of voice tell.

NOTE: Use the following formats for voice telling air surveillance data to units not capable of data link operations.

A2.1.1. New Track Report:

A2.1.1.1. Line 1: ID (Friendly, Unknown, Hostile, etc.)

A2.1.1.2. Line 2: Position (bearing and range from a coordinated point)

A2.1.1.3. Line 3: Track (track number)

A2.1.1.4. Line 4: Heading (degrees)

A2.1.1.5. Line 5: Speed (knots)

A2.1.1.6. Line 6: Altitude (hundreds of feet)

A2.1.1.7. Line 7: Engaged (yes or no; use only for Unknowns, Pendings, Hostiles)

A2.1.1.8. Line 8: Number and type (number and type of track, e.g., two MIG 21)

A2.1.1.9. Line 9: Squawk (IFF/SIF mode and code)

A2.1.1.10. Line 10: Mode 4 (Confirmed Friend, No Response, Not Interrogated)

A2.1.1.11. Line 11: Category (air, land, surface, subsurface, point)

A2.1.1.12. Line 12: Time (ZULU time of the report if the report is relayed or is for a non-real-time track)

A2.1.1.13. Line 13: Narrative (significant information not covered elsewhere)

A2.1.1.14. Line 14: Time (ZULU time of the report)

A2.1.1.15. Line 15: Authentication (if required)

A2.1.2. Revision Report. The following line numbers from the New Track Report will be used:

A2.1.2.1. Line 2: Position (bearing and range from a coordinated point)

A2.1.2.2. Line 3: Track (track number)

A2.1.2.3. Line 4: Heading (degrees)

A2.1.2.4. Line 5: Speed (knots)

A2.1.2.5. Line 6: Altitude (hundreds of feet)

A2.1.2.6. Line 13: Narrative (significant information not covered elsewhere)

A2.1.2.7. Line 15: Authentication (if required)

A2.2. New Track Report. When a new track is reported in a manual environment, use the following sequence:

A2.2.1. New track

A2.2.2. Identification

A2.2.3. Geographical Reference (GEOREF)

A2.2.4. Heading

A2.2.5. Time (ZULU)

A2.2.6. Track designator

A2.2.7. Flight size

A2.2.8. Speed

A2.2.9. Altitude (SIF S]/Radar R])

A2.2.10. Remarks (SIF Mode 3)

Example: "New Track, Pending, Lima Mike Golf Charlie four three two one, three six zero, 1730Z, Bravo two one four, one object, two seven five, R two four zero, Mode 3 code two one zero zero."

A2.3. Revision Report. Forward reports using the following sequence, and identify the parameter being changed by including the format heading in the report. The following is the revision report format:

A2.3.1. Revision

A2.3.2. Track designator

A2.3.3. Position (GEOREF or Latitude/Longitude [Lat/Long])

A2.3.4. Time (ZULU)

A2.3.5. Changes in amplifying data

Example: "Revision, Alpha two one five, Mike Lima Golf Golf one two three five, 1603Z, R three three zero, speed four two zero."

A2.4. Drop Track Report. When data cannot be confirmed, the drop track reporting sequence is:

A2.4.1. Drop track

A2.4.2. Track designator

Example: "Drop track, Alpha two one six."

A2.5. EA Report. When EA is observed, report it to external agencies in the following sequence:

A2.5.1. EA

A2.5.2. Type (s) (electronic, mechanical, communications)

A2.5.3. Azimuth from E-3

A2.5.4. Time (ZULU)

Example: "EA Mechanical, one two zero, time 1300Z."

NOTE: Do not tell EA observations unless a secure frequency is available or the EA message is encrypted.

A2.6. EA Termination Report. When all EA ceases, the reporting sequence is:

A2.6.1. EA Termination Report

A2.6.2. Type (s) (electronic, mechanical, communications)

A2.6.3. Time (ZULU)

NOTE: This report is per each type of EA reported. Do not tell EA termination reports unless a secure frequency is available or the message is encrypted.

A2.7. Orbit Report. When a target appears to be orbiting, the reporting sequence is:

A2.7.1. Track designator

A2.7.2. Orbiting left or right

A2.7.3. Position (GEOREF or Lat/Long)

A2.7.4. Time (ZULU)

Example: "Alpha two five zero, orbiting right at Mike Lima Lima Golf two one one five, 1405Z."

A2.8. Split Track Report. If a track splits into two or more segments, the track with the greatest and most immediate threat potential retains the original track designator regardless of the deviation from the original heading. Report split tracks in the following sequence:

A2.8.1. Track designator

A2.8.2. Position (GEOREF or Lat/Long)

A2.8.3. Splitting

A2.8.4. New track

A2.8.5. Position of new track (GEOREF or Lat/Long)

A2.8.6. Heading

A2.8.7. Flight size

A2.8.8. Time (ZULU)

Example: "Alpha two five zero, Papa Golf Lima Golf one two one two, Splitting, new track, Alpha two five seven, Papa Golf one three one three, two five zero, two, 1542Z."

A2.9. Merged Track Report. When two or more tracks of the same identification merge to form one track, report that track as one track with a change in the number of airborne objects. Use the track designator of the track with the greatest number of objects. If both tracks contain the same number of objects, retain the highest track designator. Reporting sequence for merged tracks is as follows:

A2.9.1. Track designator

A2.9.2. Position (GEOREF or Lat/Long)

A2.9.3. Merged

A2.9.4. Track designator

A2.9.5. Flight size

A2.9.6. Time (ZULU)

Example: "Alpha two five zero, Mike Lima Lima Golf one three four zero, merged with Alpha four one two, ten, 1245Z."

A2.10. Contact Lost Rport. If an established track does not appear on the console for a period of two minutes, report it as a "Contact Lost."

Example: "Alpha two five zero, contact lost."

A2.11. Flight (Miss) Track Report. Flight tracks result when a number of established tracks within a 10-mile radius and having similar characteristics are grouped under one track designator. Report flight tracks in the following sequence:

A2.11.1. Flight track

A2.11.2. Track designator

A2.11.3. Identification

A2.11.4. Position of center element (GEOREF or Lat/Long)

A2.11.5. Flight size

A2.11.6. Heading

A2.11.7. Speed

A2.11.8. Altitude

A2.11.9. Time (ZULU)

Example: "Mass track, Alpha one five zero, Hostile, Golf Papa Charlie Golf one zero four two, one two, zero one six, three six zero, R two seven zero, 1330Z."

A2.12. Emergency Report. When targets display emergency IFF/SIF modes/codes, notify external agencies in the following sequence:

A2.12.1. Emergency Report

A2.12.2. Track designator

A2.12.3. Position (GEOREF or Lat/Long)

A2.12.4. Type emergency display

A2.12.5. Time (ZULU)

Example: "Emergency Report, Alpha two five zero, Golf Papa Charlie Golf, Mode 3 seven seven zero zero, 1250Z."

A2.13. Emergency Report Not Displaying IFF/SIF. When a track appears to be flying an emergency pattern, notify the external agency immediately. The reporting sequence is:

A2.13.1. Emergency Report

A2.13.2. Track designator

A2.13.3. Type distress patterns (left or right) with time of legs flown

A2.13.4. Position (GEOREF or Lat/Long)

A2.13.5. Time (ZULU)

Example: "Emergency Report, Alpha two two zero, left one minute, Golf Papa Charlie November one zero four two, 1410Z."

A2.14. Reinitiating a Track. If a track exhibits significant changes in performance or is determined to be a threat after a cease tell is received, initiate tell again for that track.