Air Traffic Services Operations

DISTRIBUTION RESTRICTION. Approved for public release; distribution is unlimited.

Headquarters, Department of the Army
This page intentionally left blank.
Air Traffic Services Operations

Contents

PREFACE ................................................................................................................................. V

Chapter 1 ORGANIZATION AND MISSIONS ........................................................................ 1-1
Operational Framework ........................................................................................................... 1-1
Organization .......................................................................................................................... 1-2
Mission and Support Capabilities ......................................................................................... 1-4

Chapter 2 COMMAND AND CONTROL ........................................................................... 2-1
Section I – Battle Command ................................................................................................. 2-1
Organization .......................................................................................................................... 2-1
Section II – Command and Staff Responsibilities ............................................................... 2-2
Air Traffic Services Company ............................................................................................... 2-2
Airfield Operations Battalion ................................................................................................. 2-6
Theater Airfield Operation Group ......................................................................................... 2-10
Section III – Communications Equipment ....................................................................... 2-15
Communication Systems ...................................................................................................... 2-15
Command and Control Nets ................................................................................................. 2-17

Chapter 3 EMPLOYMENT ................................................................................................. 3-1
Section I – Air Traffic Services Company ........................................................................... 3-1
Airspace Information Services .............................................................................................. 3-1
Terminal Services ................................................................................................................ 3-2
Forward Area Support Services .......................................................................................... 3-2
Employment Considerations ............................................................................................... 3-2
Austere Airfields/Landing Sites ........................................................................................... 3-4
Section II – Theater Airfield Operations ............................................................................ 3-11
Intermediate Staging Base .................................................................................................... 3-11
Pre-Deployment Planning Considerations .......................................................................... 3-12
Employment Considerations ............................................................................................... 3-13
Austere to Enduring Airfield ................................................................................................. 3-17
Joint Interdependence .......................................................................................................... 3-20
Section III – Stability and Civil Support Operations .......................................................... 3-21

Distribution Restriction: Approved for public release; distribution is unlimited.

*This publication supersedes FM 1-120, 22 May 1995.
Disaster Relief........................................................................3-22
Homeland Security Operations..............................................3-22
Reconstruction and Restoration Operations.................3-23

Chapter 4 TRAINING AND READINESS........................................4-1
Section I – Training Overview............................................4-1
Battle-Focused Training.......................................................4-2
Section II – Air Traffic Training Program..........................4-3
ATTP Progression................................................................4-3
Commander’s Evaluation....................................................4-4
ATTP Forms and Records....................................................4-4
Section III – ATS Maintenance Training Program.............4-4
AMTP Progression...............................................................4-5
Commander’s Evaluation....................................................4-6
AMTP Forms and Records....................................................4-6
Section IV – Unit Status Reporting .....................................4-7
General .............................................................................4-7
Assessing and Reporting Unit Proficiency..........................4-7
Section V – Additional Training Considerations...............4-8

Chapter 5 MAINTENANCE OPERATIONS ...............................5-1
Section I – Unit-Level Maintenance......................................5-1
Two-Level Maintenance Operations ....................................5-1
Positioning Maintenance Support Assets.............................5-2
Split-Based Operations.......................................................5-3
Contract and Civilian Maintenance Support .........................5-3
Section II – External Maintenance Organizations...............5-3
ATS Maintenance Company–FORSCOM.............................5-4
United States Army Materiel Command...............................5-4
CECOM...........................................................................5-4
United States Army Aviation and Missile Command...............5-4
National Maintenance SORs................................................5-5
Section III – Additional Maintenance Considerations ..........5-5
Army Warranty Program.....................................................5-5
New Equipment Training Teams .........................................5-6
Army Test, Measurement, and Diagnostic Equipment ..........5-6

Appendix A DEPLOYMENT-REDEPLOYMENT LIFE-CYCLE........A-1
Appendix B AIR TRAFFIC CONTROL SYSTEMS....................B-1
Appendix C COMPOSITE RISK MANAGEMENT.....................C-1
Appendix D CHECKLISTS......................................................D-1
GLOSSARY..............................................................................Glossary-1
REFERENCES........................................................................References-1
INDEX ....................................................................................Index-1
Figures

Figure 1-1. ATS company organizational chart ................................................................. 1-2
Figure 1-2. AOB organization .......................................................................................... 1-3
Figure 1-3. TAOG organization ....................................................................................... 1-3
Figure 1-4. TAOG headquarters organization ................................................................. 1-4
Figure 3-1. Depiction of assembly area ground graphics and airspace ......................... 3-6
Figure 3-2. Landing zone orientation ............................................................................... 3-6
Figure 3-3. FARP with associated airspace and FSCMs ............................................... 3-7
Figure 3-4. Depiction of inverted Y and additional landing sites ................................. 3-8
Figure 3-5. LZ airspace requirements ............................................................................. 3-9
Figure 3-6. Intermediate staging base ............................................................................ 3-12
Figure 3-7. Example of wagon wheel overlay ............................................................... 3-17
Figure 3-8. Headquarters and fire truck teams ............................................................... 3-19
Figure 5-1. COMNAV section ....................................................................................... 5-1
Figure B-1. AN/TSW-7A ATC central .......................................................................... B-1
Figure B-2. AN/MSQ-135 mobile tower system .......................................................... B-2
Figure B-3. AN/TSQ-198 TTCS .................................................................................. B-3
Figure B-4. AN/TPN-31 ATNAVICS .......................................................................... B-4
Figure B-5. AN/TSQ-221 TAIS ................................................................................ B-4
Figure C-1. Sample risk matrix ..................................................................................... C-3
### Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 2-1</td>
<td>Current radio communication systems</td>
<td>2-16</td>
</tr>
<tr>
<td>Table 2-2</td>
<td>Company/AOB communications connectivity</td>
<td>2-18</td>
</tr>
<tr>
<td>Table 2-3</td>
<td>TAOG communication architecture systems</td>
<td>2-23</td>
</tr>
<tr>
<td>Table 3-1</td>
<td>Landing distance sizes</td>
<td>3-8</td>
</tr>
<tr>
<td>Table 3-2</td>
<td>Army Airfield and Heliport classes</td>
<td>3-9</td>
</tr>
<tr>
<td>Table C-1</td>
<td>Steps of risk management</td>
<td>C-1</td>
</tr>
<tr>
<td>Table C-2</td>
<td>Sample tactical ATC risk assessment</td>
<td>C-2</td>
</tr>
<tr>
<td>Table C-3</td>
<td>Terms and definitions</td>
<td>C-3</td>
</tr>
<tr>
<td>Table D-1</td>
<td>Example of a pre-deployment/pre-temporary duty checklist</td>
<td>D-1</td>
</tr>
<tr>
<td>Table D-2</td>
<td>Example of a convoy precombat inspection checklist</td>
<td>D-2</td>
</tr>
<tr>
<td>Table D-3</td>
<td>Example of a precombat checklist</td>
<td>D-4</td>
</tr>
<tr>
<td>Table D-4</td>
<td>Example of a LZ survey checklist</td>
<td>D-8</td>
</tr>
<tr>
<td>Table D-5</td>
<td>Example of a reconnaissance report checklist</td>
<td>D-9</td>
</tr>
<tr>
<td>Table D-6</td>
<td>Example of an ATC handover checklist</td>
<td>D-11</td>
</tr>
<tr>
<td>Table D-7</td>
<td>Average march rates for mixed columns (in kilometers)</td>
<td>D-14</td>
</tr>
<tr>
<td>Table D-8</td>
<td>Average vehicles speed (kilometers per hour)</td>
<td>D-14</td>
</tr>
<tr>
<td>Table D-9</td>
<td>Time distance rates (kilometers)</td>
<td>D-14</td>
</tr>
<tr>
<td>Table D-10</td>
<td>Time distance rates (miles)</td>
<td>D-15</td>
</tr>
<tr>
<td>Table D-11</td>
<td>SPOTREP</td>
<td>D-15</td>
</tr>
<tr>
<td>Table D-12</td>
<td>Convoy status report</td>
<td>D-16</td>
</tr>
<tr>
<td>Table D-13</td>
<td>Weather advisory/watch (weather watch) report</td>
<td>D-16</td>
</tr>
<tr>
<td>Table D-14</td>
<td>Rail load status report</td>
<td>D-17</td>
</tr>
<tr>
<td>Table D-15</td>
<td>Closure report</td>
<td>D-17</td>
</tr>
<tr>
<td>Table D-16</td>
<td>Personnel daily summary report</td>
<td>D-18</td>
</tr>
<tr>
<td>Table D-17</td>
<td>Major subordinate command/unit reporting</td>
<td>D-18</td>
</tr>
<tr>
<td>Table D-18</td>
<td>Meaconing, intrusion, jamming, interference report</td>
<td>D-19</td>
</tr>
<tr>
<td>Table D-19</td>
<td>Medical evacuation 9-line request</td>
<td>D-19</td>
</tr>
<tr>
<td>Table D-20</td>
<td>Unexploded ordinance report</td>
<td>D-20</td>
</tr>
</tbody>
</table>
Preface

Field manual (FM) 3-04.120 serves as a doctrinal guide primarily intended for the Theater Airfield Operations Group (TAOG), Airfield Operations Battalion (AOB), and air traffic services (ATS) company commanders, subordinate leaders, and assigned personnel. It is applicable for use by the division, corps, Theater Aviation Command (TAC), Theater Support Command (TSC), as well as the Army aviation community including members of allied, coalition, special operations, and civil support forces requiring air traffic and airfield management support. It also assists Army branch schools and joint military services in teaching Army ATS operations.

Army transformation and future force development of ATS will enable the tailoring of ATS capabilities as well as embedding an airfield management capability at theater airfields. This manual describes structure, mission, employment and sustainment of ATS units supporting major combat, stability and civil support operations. It establishes responsibilities and duties of key personnel and discusses planning considerations required for training, operations, and combat. FM 3-04.120 is authoritative and prescriptive but is not inflexible. Situations in combat are resolved by the intelligent interpretation and application of this doctrine. Standardized ATS operations at division and theater level are necessary for the success of modularity, readiness, and effective maneuver support operations.

This FM applies to the Active Army, the Army National Guard/Army National Guard of the United States, the United States Army Reserve, and the Army civilian employees of the transformation force unless otherwise stated. FM 3-04.120 builds on collective knowledge and experience gained through recent operations, exercises, and the deliberate process of informed reasoning. Its principles and fundamentals address new technologies and evolving responses to diverse threats. It will also assist Army branch schools in teaching ATS operations.

The proponent of this publication is Headquarters, United States Army Training and Doctrine Command (TRADOC). Send comments and recommendations on Department of the Army (DA) Form 2028 (Recommended Changes to publications and Blank Forms) or automated link (http://www.usapa.army.mil/da2028/daform2028.asp) to Commander, United States Army Aviation Warfighting Center (USAAWC), ATTN: ATZQ-TD-D, Fort Rucker, Alabama 36362-5263. Comments may be e-mailed to the Directorate of Training and Doctrine (DOTD) at av.doctrine@us.army.mil. Other doctrinal information can be found on the Internet at Army Knowledge Online (AKO) or call defense switch network (DSN) 558-3551 or (334) 255-3551.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

This publication has been reviewed for operations security considerations.
This page intentionally left blank.
Chapter 1
Organization and Missions

Over the last century, warfare became increasingly complex. Army organizations changed from large division sized organizations to today’s brigade-based combined arms teams. To meet this challenge ATS organizations have undergone a transformation to better enable aviation to meet the requirements of the changing battlefront. ATS organizations are now designed to efficiently support Army aviation and joint, interagency, interdepartmental, and multinational (JIIM) forces. ATS organizations enable safe and efficient use of positive and procedural control measures with a designated airfield management structure managing high-density and congested airfields at theater level. The organizational tenets for this design are doctrinally balanced, logistically supportable, modernized, multifunctional, and modular.

OPERATIONAL FRAMEWORK

1-1. ATS organizations are an enabling component of the modular, scalable and tailored Army aviation force. Responsiveness requires a capability to support forcible and early entry contingency response and conduct simultaneous operations immediately on arrival. Air traffic operations are conducted overseas within contiguous and noncontiguous areas, throughout the spectrum of conflict, and during all phases of campaign themes. Air traffic organizations conduct civil support operations in response to natural or manmade disasters, accidents, and incidents within the United States and its territories.

1-2. ATS companies assigned to a combat aviation brigade (CAB) conduct operations as organizational elements of the general support aviation battalion (GSAB). This command relationship maximizes efficiency of operations, serving as a combat enabler for Army aviation and divisions. The company must be able to operate and complete its mission with the CAB or as a member of an aviation task force supporting JIIM forces. The company and its elements may operate within an aviation battalion task force in a direct support (DS) or general support (GS) role.

1-3. AOBs and TAOGs are additional ATS forces that support theater-level requirements. The AOBs have an airfield management element as well as air traffic personnel and equipment to execute airfield and air traffic responsibilities. One TAOG is capable of supporting five theater airfields as required. TAOGs and AOBs are deployed based on METT-TC and may operate from a single base, or conduct split-based operations in multiple locations within the theater of operations.

UNIT SUPPORT CAPABILITY

1-4. The ATS company, AOB, and TAOG must be prepared to support—

- Strategic deployment planning and execution.
- Administrative and tactical movements.
- Intelligence preparation of the battlefield (IPB).
Chapter 1

- Employment of communications systems.
- Force protection/sustainment.

PLANNING
1-5. The ATS company, AOB, and TAOG headquarters must be able to simultaneously—
- Plan, prepare, execute, and assess current and future operations.
- Visualize, describe, and direct subordinate elements to accomplish missions.
- Protect and sustain their forces.

ENVIRONMENTS
1-6. All units must train for and accomplish operations under the following conditions:
- Near ground forces.
- Day or night.
- Under limited visibility (instrument meteorological conditions [IMCs] proficiency is critical).
- All environments such as desert; mountain; rolling hills; dense forest; jungle; plains; urban; hot, basic, cold and severe cold weather; and chemical, biological, radiological and nuclear (CBRN).

ORGANIZATION

AIR TRAFFIC SERVICES COMPANY
1-7. The ATS company (figure 1-1) is organic to the GSAB for training, safety, standardization, leader development and sustainment. It is inherently dependent on the GSAB for ground maintenance, logistics, personnel actions, feeding, health care, and other sustainment support services.

![ATS company organizational chart](image-url)

Figure 1-1. ATS company organizational chart
AIRFIELD OPERATIONS BATTALION

1-8. The AOB (figure 1-2) is composed of several staff and operational sections/platoons required for the management and execution airfield activities at designated airfields within the theater of operations. The AOB has organic ATS forces, airfield management headquarters, and sustainment personnel.

![Figure 1-2. AOB organization](image)

THEATER AIRFIELD OPERATIONS GROUP

1-9. The TAOG (figure 1-3) is organic to the theater aviation command. A TAOG consists of a headquarters and headquarters company (HHC), and five AOBs. The TAOG provides theater airfield command and control (C2), planning, and oversight throughout the theater of operations.

![Figure 1-3. TAOG organization](image)
1-10. Figure 1-4 depicts the TAOG headquarters organization.

![Figure 1-4. TAOG headquarters organization](image)

**MISSION AND SUPPORT CAPABILITIES**

**AIR TRAFFIC SERVICES COMPANY**

1-11. An ATS company supports CABs by providing terminal area and en route airspace information and control services. ATS companies provide services to support CABs throughout full spectrum operations. ATS companies are composed of a control tower, ground control approach (GCA), airspace information center (AIC), and two tactical aviation control teams (TACTs). They also deploy as part of the CAB and are an integral part of the brigade’s readiness.

1-12. ATS companies have the following capabilities:

- Deployable within 96 hours of notification, and are equipped and capable of operations in any environment.
- Control tower operations upon 30 minutes of arrival in an area of operation (AO) and become fully operational within 1 hour of arrival.
- Provide self-sustaining operations for 72 hours upon arrival in an AO.
- TACTs in austere/tactical environment operational 15 minutes after arrival in an AO.
- Support aircraft recovery operations including personnel recovery, medical evacuation (MEDEVAC), and assistance to aircraft in distress (battle damage, inclement weather, and disoriented aircraft).
- Provide airspace management operations in support of manned and unmanned air operations for its designated airspace sector by providing updates of airspace information.
- Provide navigational assistance to friendly aircraft.
- Coordinate air traffic control (ATC) procedures with military C2 agencies and civilian agencies/organizations, including the Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO).
- Provide personnel for survey/reconnaissance party team; ensuring air traffic procedures, ATS equipment emplacement criteria, and terminal instrument procedures (TERPs) are considered and addressed during site survey.