FM 1-200

FIELD MANUAL

AIR TRAFFIC CONTROL FACILITY OPERATIONS AND TRAINING

HEADQUARTERS, DEPARTMENT OF THE ARMY
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***This manual supersedes FM 1-200, 31 March 1976, including all changes.**

SECTION 100
GENERAL

110. Application

111. Purpose.

111.1 This manual provides administrative and operational standards for the operation of US Army air traffic control (ATC) facilities.

112. Applicability.

112.1 This manual applies worldwide to all active Army, Army National Guard (ARNG) or United States Army Reserve (USAR), and civilian ATC personnel performing duties in US Army ATC facilities.

113. Scope.

113.1 This manual is supplemental to Federal Aviation Administration (FAA) Handbook 7110.65 which prescribes the separation minima and procedures to be used in providing ATC services. These minima and procedures apply except—

a. When the US Army is providing ATC services for, or in, overseas areas and deviations are necessary to conform with foreign government regulations and these deviations are outlined in an agreement between the theater commander and the host government concerned.

b. When tactical deployment of ATC services or facilities necessitates deviation at other than permanently established airfields.

120. Use of the Manual

121. Word usage.

121.1 As used in this manual, except when context requires otherwise—

a. "Shall" or an action verb in the imperative sense means a procedure is mandatory.

b. "Should" means a procedure is recommended.

c. "May" or "need not" means a procedure is optional.

d. "Will" means futurity, not a requirement for application of a procedure.

e. Singular words signify the plural.

f. Plural words signify the singular.

g. "Aircraft" means the airframe, crew members, or both.

h. The word "he" when used in this publication represents both the masculine and feminine genders, unless otherwise specifically stated.

122. Explanation of terms.

122.1 For the purpose of this manual, the following terms and their meanings apply:

a. Airport surveillance radar (ASR). Approach control radar used to detect and display an aircraft's position in the terminal area. ASR provides range and azimuth information but does not provide elevation data. Coverage of ASR can extend up to 60 miles.

b. Approach clearance. Authorization by ATC for an aviator to conduct an instrument approach. The type of instrument approach for which cleared, and other pertinent information is provided in the approach clearance, when required.

c. Army radar approach control (ARAC). An ATC facility located at a US Army airport utilizing surveillance, and normally precision approach radar (PAR), and air/ground communications equipment to provide approach control services to aircraft arriving, departing, or transiting the airspace controlled by the facility. Service may be provided to both civil and military airports.

d. Controller. A controller means ATC specialist; a duly authorized person providing ATC service.

e. Electronic warfare (EW). Military action involving the use of electromagnetic energy to determine, exploit, reduce, or prevent hostile use of the electromagnetic spectrum. An action which retains friendly use of the electromagnetic spectrum. Three divisions are—

(1) Electronic warfare support measures (ESM). Actions taken to search for, intercept, locate, and immediately identify radiated electromagnetic energy for immediate threat recognition.

(2) Electronic countermeasures (ECM). Actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, including electronic jamming and electronic deception.

(3) Electronic countercountermeasures (ECCM). Actions taken to ensure friendly use of the electromagnetic spectrum despite the enemy's use of EW.

f. Facility. An ATC facility, including personnel, equipment, and structures, that provides ATC services (that is, control tower, approach control (radar or nonradar), or ground control approach (GCA), flight operations center (FOC), or flight coordination center (FCC)).

g. Facility rating. A determination of competence, qualification, or quality; after which a certificate and rating is issued to an applicant which confirms such determination, grants certain privileges, and may prescribe certain limitations in accordance with the Federal aviation act, Federal aviation regulations (FAR), and Army regulations.

h. Facility training manual (FTM). A locally developed publication used as a training and reference manual in the facility training program (FTP).

i. Facility training program (FTP). An ATC facility

training program designed to develop and maintain the proficiency and skills necessary to perform duties.

j. Flight coordination center (FCC). An element which is subordinate to the FOC, and is used to extend the geographical area of the FOC. The FCC provides a means of relaying information between aircraft and the FOC.

k. Flight operations center (FOC). A major element of the flight operations system (FOS). FOC will provide flight following services for military aircaft and may assist in search and rescue procedures.

l. Ground controlled approach (GCA). A radar approach system operated from the ground by ATC personnel transmitting instructions to the pilot by radio. The approach may be conducted with ASR only or with both surveillance and PAR. Usage of the term GCA by pilots is discouraged, except when referring to a GCA facility. Pilots should specifically request a PAR approach when a precision radar approach is desired or request an ASR or surveillance approach when a nonprecision radar approach is desired.

m. Joint facility. An ATC facility wherein the division of operational responsibility is clearly defined between the Army and other agency.

n. Meaconing, intrusion, jamming, and interference (MIJI). A joint program which encompasses the reporting, evaluating, and issuing of information on suspected hostile EW activities.

o. Minimum vectoring altitude (MVA). The lowest mean sea level (MSL) altitude at which an instrument flight rules (IFR) aircraft will be vectored by a radar controller, except as otherwise authorized for radar approaches. The altitude meets IFR obstacle clearance criteria. It may be lower than the published minimum enroute altitude (MEA) along an airway or J-route segment. It may be used for radar vectoring only upon the controller's determination that an adequate radar return is being received from the aircraft being controlled. Charts depicting MVA are normally available only to the controllers and not the aviators.

p. Precision approach radar (PAR). A precision instrument approach wherein the controller issues guidance instructions, for aviator compliance, based on the aircraft's position in relation to the final approach course (azimuth), the glideslope (elevation), and the distance (range) from the touchdown point on the runway as displayed on the controller's radar scope.

q. Qualified controller. A facility rated controller or one who is position qualified in one or more controller positions.

r. Standby equipment. Standby and/or dual channel radar, navigational aid (NAVAID), or ATC communications equipment capable of providing the identical service of the primary equipment and spot-checked to assure it is functioning in a manner equal to the primary equipment, (TM 95-225).

s. Terminal radar facility. A facility that provides terminal radar service (for example, radar vectoring, sequencing, and separation for all IFR and participating visual flight rules (VFR) aircraft) through the use of PAR or ASR.

123. Changes to the manual.

123.1 Users are encouraged to submit recommended changes and comments to improve the publication. Comments should be keyed to specific page, paragraph, and line of the text in which the change is recommended. Reasons will be provided for each comment to ensure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded directly to Commander, US Army Air Traffic Control Activity (USAATCA), ATTN: CCQ-SYS-P, Ft Huachuca, AZ 85613.

124. Waivers.

124.1 Request for waiver to policy or procedures set forth in this manual or FAA Handbook 7110.65 will be forwarded through channels to Commander, USAATCA, ATTN: CCQ-SYS-P, Ft. Huachuca, AZ 85613.

124.2 Waivers issued will contain a cancellation date not to exceed 1 year from date of issuance. Existing waivers will be re-evaluated, canceled, or assigned an expiration date.

124.3 Requests for renewal or extension waivers shall be the responsibility of the organization initiating the original waiver request.

130. Classification of Facilities

131. Classification of Army ATC facilities.

131.1 ATC facilities within the US Army are grouped into the following major classifications:

a. Airfield/heliport ATC tower.

b. Terminal radar facilities.

c. FOC/FCC.

SECTION 200

RESPONSIBILITIES AND STANDARDS

210. General

211. Scope.

211.1 The responsibilities and standards outlined herein are mandatory requirements. A local ATC facility standing operating procedure (SOP) shall be used to supplement these requirements when necessary.

211.2 Each facility is under the supervision of a facility chief who is responsible for the facility's efficient administration and operation.

211.3 Operating positions shall be manned and functions performed only by ATC personnel qualified to perform duties as outlined herein.

211.4 ATC/facility chief may permit consolidation of operating positions and the performance of more than one function by a controller.

220. Responsibilities

221. Position titles and responsibilities.

221.1 Supervisory/administrative categories.

a. ATC chief. Responsible for the supervision and management of all ATC facilities located at an airfield/heliport.

b. ATC facility chief. Responsible for the administration, duty schedules, and operation within an ATC facility (that is, tower, approach control, GCA, FOC, or FCC).

c. Training supervisor. Appointed by the facility chief, and is responsible for conducting all facility training to include qualification, proficiency, and remedial training and maintaining all facility training records prescribed herein.

d. Shift supervisor. Responsible to the facility chief for the efficient operation of the facility during his tour of duty. Specifically responsible for assigning and directing subordinates in all phases of their work, giving on-the-job training to trainee controllers, giving assistance and advice in emergencies, maintaining facility records, preparing reports of activities, delegating responsibility to subordinates, and assisting the training supervisor in the facility training program for controllers.

e. Controller-in-charge. When two or more facility rated controllers are on duty and no official supervisory personnel are available, one of these controllers shall be designated by the facility chief as "controller-in-charge" for that shift. Controllers so designated shall continue to perform ATC duties in addition to those associated with shift supervision. This designation may be rotated among facility rated controllers. Supervision, by itself, does not justify a higher rank or grade. (It is not the intent of this paragraph to preclude the military rank structure.)

221.2 Controller position categories.

a. Shift supervisor (Position WC). Supervises all phases of work on a shift in the tower facility.

b. Shift supervisor (Position WA). Supervises all phases of work on a shift in a terminal radar facility.

c. Shift supervisor (Position WF). Supervises all phases of work on a shift in an FOC or FCC.

d. Local control (Position LC). Issues information and clearances to aircraft operating on the landing area, to VFR traffic operating in the control zone or airport traffic area, and to IFR traffic released to local control jurisdiction.

e. Ground control (Position GC). Issues information and clearances to taxiing aircraft and vehicular and pedestrian traffic within the movement area on the airfield/heliport.

f. Ground radar (Position GR). Employs airport surface detection radar equipment (ASDE) to provide ground control (GC) functions.

g. Approach control (Position AC). Provides separation between all aircraft operating IFR within the designated area of jurisdiction through application of nonradar standards.

h. Flight control (Position FC). Provides separation between all aircraft operating IFR within a designated area of jurisdiction (FOC/FCC only).

i. Arrival control (Position AR) (Radar). Expedites the movement of arriving aircraft through the use of radar equipment, providing radar separation from other aircraft. Also provides radar traffic advisory service to VFR aircraft when workload permits.

j. Airport surveillance radar (Position ASR). Operates ASR equipment to assist aircraft in the terminal area. ASR may be used to expedite the movement of departing/arriving aircraft, provide radar separation, vector aircraft to intercept the final approach course for hand-off to PAR, or to conduct a surveillance approach (see FAA Handbook 7110.65). ASR position may provide radar traffic advisory service to VFR aircraft, workload permitting. (ASR position will normally be associated with a dual AN/FPN-40 and/or an

AN/TPN-18 radar system.)

k. Precision approach radar (Position PAR). Operates precision radar equipment to assist pilots to approach the runway and monitors instrument approaches.

l. Departure control (Position DC). Provides separation between aircraft departing IFR from a terminal area through the application of nonradar standards.

m. Departure control (Position DR) (Radar). Provides departure control (DC) service and expedites the movement of departing aircraft by providing radar separation between successive departures and between departing and arriving aircraft. Also provides radar traffic advisory service to VFR aircraft when workload permits.

n. Flight data (Position FD). Receives, posts, and relays flight data and assists in the operation of the facility as directed.

o. Clearance delivery (Position CD). Delivers IFR clearances to departing aircraft. When this position is activated, these functions are then separate from the ground control or flight data positions.

p. Flight data (Position AD) (Radar). Copies and relays clearances/messages, and maintains records as directed.

q. Coordinator (Position CA). Coordinates with the control tower for proper arrival and departure sequences; coordinates and directs activities of designated positions of operation; and provides necessary coordination during Stage II and III operations (ARAC only).

r. Coordinator (Position CI). Coordinates/regulates the flow of air traffic; receives, posts, and relays aircraft movement information; maintains logs and records; and coordinates between positions of operation and facilities as required (ARAC only).

s. Flight following (Position FF). Issues information/advisories to arriving/departing/enroute aircraft, assists in search and rescue activities as required, and maintains logs and records (FOC/FCC only).

221.3 Controller. Responsible for formulating and issuing clearances and control instructions to provide appropriate separation between aircraft operating under the jurisdiction of the facility. Effects coordination with appropriate positions of operation and other facilities; provides flight assistance service to aircraft; assists in search and rescue activities; and reports aircraft accidents and deviations from established regulations and practices.

221.4 Assistant controller. Responsible for assisting in the control of air traffic, receiving and relaying flight data, calculating and posting flight data on flight progress strips, and other duties as directed.

230. Standards

231. Certification and rating.

231.1 Military and civilian personnel performing operational ATC duties in an ATC facility shall be certified and facility rated in accordance with AR 95-37 and remain current as specified herein. This requirement shall not preclude a newly assigned ATC/facility chief from assuming other administrative and/or military responsibilities before becoming facility rated.

231.2 Air traffic controllers performing control tower duties shall be certified to make limited weather observations at the Army airfield/Army heliport (AAF/AHP) to which assigned, before being facility rated. It will be the responsibility of the ATC/facility chief or other appropriate authority, to coordinate with the nearest US Air Force (USAF), Navy, National, or FAA weather service facility to establish a program for training and certifying Army air traffic controllers to make limited weather observations. These observations are generally limited in content to—

a. Meteorological elements which can be determined from readily available weather equipment readouts (wind, runway visual range (RVR), altimeter setting, cloud height, etc), and

b. Elements and conditions which can be determined directly but without the aid of instruments (for example, sky condition, prevailing visibility, RVR, and obstructions to vision).

231.3 Under combat conditions, request training and certification from the USAF staff agency responsible for providing weather support.

231.4 Each tower controller shall successfully renew this qualification annually. The results of this "certification" shall be entered in section IV, DA Form 3479-R (app A). Thereafter, on annual recertification, the results shall be entered in section VII, DA Form 3479-R. Written/oral/practical test action shall be entered in section VI, DA Form 3479-R.

Note. If a collocated or adjacent weather service is not available or cannot support the training and certification of Army controllers to make limited weather observations, the ATC/facility chief shall apply for a waiver in accordance with paragraph 124.

232. Assignment of operating positions.

232.1 Controllers shall be assigned to positions of operations as required by traffic conditions, equipment, and individual qualifications. During periods of limited activity, positions may be consolidated in consonance with the facility activity and the qualifications of the controllers involved.

232.2 An ATC trainee may act at each control position for which qualified, under the general supervision of a facility rated controller for that facility; otherwise, a trainee must be under the direct (one-on-one) supervision of a facility rated controller for that facility.

232.3 When PAR/ASR approaches are being conducted by a trainee, the aviator shall be notified as soon as possible after initial contact that controller

training is in progress. Trainees may, at the discretion of the shift supervisor, be assigned to or permitted to work, under direct supervision, at precision/surveillance final controller position when the weather conditions are below VFR, but are not less than 500 feet and/or visibility 1 mile, and the supervising controller has direct communications override for that control position.

232.4 During facility rating examinations, the shift or training supervisor or a current facility rated controller shall retain supervisory responsibility for the control of air traffic. This responsibility may be assumed by the examiner, provided he concurs and is qualified to control air traffic at that facility.

233. Hours of duty.

233.1 Personnel involved in the control of air traffic or the direct supervision of personnel performing these functions shall be scheduled for duty as follows:

a. An 8-hour shift is standard; however, not more than 10 consecutive hours may be worked at any one time.

b. A 40-hour week is standard; however, up to a 48-hour week may be authorized for a period not to exceed 60 days.

c. A 16-hour rest period between shifts is standard, and an 8-hour rest period is minimum. Not less than one 24-hour rest period will be scheduled during each 7 consecutive days.

d. A 15-minute rest period will be required during each 4 hours of continuous work, provided traffic density and facility operations permit.

233.2 The standard daily (8-hour) or weekly (40-hour) shift shall be exceeded only when direct ATC services are required.

234. Proficiency (currency) requirements.

234.1 All Army air traffic controllers, except ATC chiefs, shall remain proficient in the ATC facility to which assigned.

234.2 ATC/facility chiefs and training noncommissioned officers (NCOs)/supervisors shall perform controller duties at least 24 hours per calendar month. Time spent monitoring trainee controllers or administering position qualifications and/or facility ratings shall not be used to satisfy this requirement, except as noted in 234.3*a*(1) and (2) below, and not more than 6 hours flight data time per facility shall be utilized.

234.3 To remain proficient in a facility, all other controllers shall demonstrate satisfactory performance of duties in all control positions associated with the rating held for a total of 80 hours each calendar month.

a. In addition to the above time requirement, each radar controller shall conduct ten actual radar approaches of which at least seven shall be PAR. Also, at least five no-gyro and/or emergency approaches, actual or simulated, shall be conducted during each calendar month.

(1) When a facility rated radar controller is "signed on" with a trainee and the amount of air traffic activity may limit proficiency, the facility rated controller may concurrently count those trainee controlled approaches monitored. However, not more than five monitored approaches may be counted toward monthly proficiency.

(2) Should a lack of actual air traffic necessitate utilization of simulation (for example, OH-36), up to 50 percent of the proficiency approach requirements may be simulator approaches.

(3) In accordance with AR 95-37, sufficient time, equipment, and training flights shall be made available to enable radar controllers to meet operational and proficiency requirements.

b. Facility rated tower controllers, other than the facility chief and training NCO, may apply the time spent directly supervising a trainee, but not to exceed 30 percent of the total monthly time.

234.4 The air traffic controller who has failed to maintain proficiency for the previous month shall be given a special evaluation, DA Form 3479-1-R (app C). Evaluation shall be administered on all positions relative to the rating held and preferably under moderate traffic conditions. Evaluation must be satisfactorily completed before a controller assumes the responsibility of a control position without direct supervision, and shall be of such duration to provide a reliable sample of performance. Evaluations will be administered by a facility chief, training NCO, or designated shift supervisor.

234.5 All currency checks shall be entered in section VII, DA Form 3479-R. If a controller does not maintain currency, this will be noted in section III.

234.6 If the controllers in a radar facility cannot maintain currency because of insufficient air traffic, the airfield commander shall be advised in writing that a Notice to Airmen (NOTAM) should be issued stating the radar facility is "out of service." US Army Communications Command (USACC) agency/detachment commander shall make arrangements to conduct VFR training flights with locally based aircraft in order to qualify noncurrent/nonrated radar controllers.

235. Special medical considerations/use of drugs, sedatives, and intoxicants.

235.1 ATC personnel receiving any substance or medical procedure likely to provoke an adverse systemic reaction shall be restricted from duties involving the control of air traffic until declared fit by a flight surgeon. Factors to consider and appropriate medical restrictions to ATC are addressed under AR 40-8.

235.2 Controllers wishing to become blood donors shall clear such action with the facility chief before actually donating blood.

235.3 A copy of current medical clearance for

ATC duties (DA Form 4186) shall be retained in the individual's training record.

236. Performance of non-ATC duties.

236.1 Air traffic controllers shall not be required to perform non-military occupational specialty (MOS) related duties outside the facility except through a letter of agreement (as required) between the USACC agency/detachment commander or other appropriate authority and the host post, camp, or station commander. This letter of agreement shall specify that all such duties shall be stringently curtailed when manning for that facility is below total authorized strength (that is, total tables of distribution and allowances (TDA) authorization plus recognized table of organization and equipment (TOE)/United States Strategic Army Forces (STRAF) augmentation) and shall be discontinued when manning diminishes to or below emergency manning level (EML).

237. Noncontroller personnel in ATC facilities.

237.1 The number of noncontroller personnel in ATC facilities shall be kept to a minimum. The ATC/facility chief or, in his absence, the shift supervisor shall be the final authority on admittance and number of noncontroller personnel permitted in the facility at any one time.

240. Facility Hours of Operation

241. Hours of operation.

241.1 The post, camp, or station commander shall determine hours of operation of the ATC facility. When long-term additional hours of operation that cannot be satisfied with existing resources are requested, action shall be initiated in accordance with AR 95-9.

241.2 When a facility does not operate 24 hours a day, 7 days a week, the actual hours of operation shall be published in appropriate flight information publications.

241.3 Some ATC facilities which do not operate continuously *may* be called upon to provide one of the following services.

a. Standby operation. Standby operation does not require that personnel remain in the facility (that is, tower cab or radar room); however, they must be available and able to resume normal operations within 15 minutes. In the case of GCA facilities, preheats are left on.

b. On-call operation. The ATC facility may be completely closed down; however, effective ATC services can be provided within a prescribed period of time (for example, 1 hour, 2 hours, etc). The minimum response time shall be 1 hour for "on-call" status.

242. Facility manning.

242.1 Facility manning shall be determined by air traffic volume, complexity, hours of operation, and number of controller positions (defined in para 221.2) necessary to meet operational requirements.

242.2 Only qualified controllers will be assigned to controller positions without direct supervision. A minimum of one facility rated controller shall be assigned to each shift, and nonrated controllers shall only be assigned duties without direct supervision at those control positions for which they are qualified.

242.3 At locations providing terminal radar service, fully qualified ATC radar, NAVAID, and communications repairmen shall be available on the airfield/heliport during normal duty hours (for example, 0730-1615, Monday through Friday).

242.4 During other than normal duty hours, when weather conditions are, or forecast to be, at or below VFR minimums and terminal radar service is anticipated (for example, inbound aircraft, aviator has requested on flight plan), a fully qualified ATC radar repairman shall be available as indicated below.

a. When radar facilities equipped with standby equipment or where other approved instrument approaches (that is, very high frequency (VHF) omnidirectional range (VOR) or instrument landing system (ILS)) to the airfield/heliport are available and operational, the necessity for placing radar maintenance personnel on standby or on-call shall be left to the discretion of the USACC agency/detachment commander and shall be so stated in written policy/procedures governing ATC maintenance.

b. If a terminal radar system, which is not equipped with standby equipment, provides the only approved instrument approach to the airfield/heliport, a qualified ATC radar repairman shall be on duty at the airfield/heliport.

c. Where a terminal radar system equipped with standby equipment provides the only approved instrument approach to the airfield/heliport, ATC radar maintenance will be available as directed by the USACC agency/detachment commander. Such direction shall be set forth in written procedures.

242.5 During other than normal duty hours, the USACC agency/detachment commander shall establish written procedures to ensure qualified radio and NAVAID maintenance personnel are prepared to respond expeditiously to malfunctions of NAVAID or communications equipment.

243. Emergency manning level (EML).

243.1 USACC agency/detachment commanders shall formulate proposed EML for ATC facilities. EML shall be forwarded, with rationale, through channels to Commander, USAATCA, ATTN: CCQ-SYS-P, Ft Huachuca, AZ 85613, for validation before implementation.

243.2 Establishment of EML shall be based upon the minimum number of qualified personnel required to provide service for the hours of operation

necessary to support the primary mission and shall be based upon—

a. A 48-hour work week per controller.

b. The exclusion of nonqualified controllers.

c. Combined positions of operation wherever practicable.

243.3 Following validation of the ATC facility EML, the USACC agency/detachment commander shall—

a. Advise the post, camp, or station commander, in writing, of the EML for his facilities.

b. Make every effort to anticipate EML situations and advise through channels Commander, USAATCA, ATTN: CCQ-SYS-P, Ft Huachuca, AZ 85613, and the post, camp, or station commander as far in advance as possible that a facility is anticipated to be at, or below, EML.

243.4 ATC facilities may be operated at EML for a period not to exceed 60 days. If assigned and attached qualified controller strength is not increased during this time frame, a reduction in service/hours of operation is required.

243.5 At any time qualified controller strength falls below EML, a curtailment of services/hours of operation shall be effected immediately and shall remain in effect until EML is attained.

244. Reporting EML conditions. At the earliest date it is foreseen that facility manning will drop below EML or that EML conditions will exceed 60 days, USACC agency/detachment commander shall notify through channels Commander, USAATCA, ATTN: CCQ-SYS-P, Ft Huachuca, AZ 85613.

244.1 Report format.

a. Notification is made by message in the following format:

(1) Title. EML Report.

(2) Facility and location.

(3) Services/hours to be curtailed in EML extends for more than 60 days.

(4) Expected implementation date of curtailment.

(5) Specific reasons for the proposed curtailment.

(6) Proposed hours of operation and/or services remaining.

(7) Estimated date normal hours/services should be resumed.

(8) Action implemented.

b. If it is determined that corrective action cannot be taken in time to avoid a curtailment, the USACC agency/detachment commander shall notify the post, camp, or station commander of the anticipated reduction in ATC hours of operation or services.

c. A supplemental report shall be submitted by the USACC agency/detachment commander through channels to Commander, USAATCA on the date curtailment occurs and again on the date normal operations are resumed.

245. Minimum shift requirements.

245.1 Shift duty schedules and actual shift manning will normally provide for no fewer qualified controllers than provided for each shift by application of DA Pam 570-567, Staffing Guide for US Army Communications Facilities. This does not preclude reducing the actual shift manning for periods when it is definitely known that the flying activity will be less than normal day-to-day activities (for example, holidays and weekends).

245.2 The minimum number of personnel scheduled and present for duty in the facility shall not be less than the following:

a. Control tower. Two qualified controllers, of which one shall be facility rated.

b. Approach control tower (nonradar). Same as *a* above, plus one facility rated controller for the nonradar approach control function.

c. GCA. Same as *a* above.

d. ARAC. Same as *a* above.

e. FOC/FCC.

(1) FOC—Two qualified controllers of which one shall be facility rated.

(2) FCC—Two qualified controllers of which one shall be facility rated.

245.3 The minimum number of personnel scheduled and present for duty in a tactical (mobile) ATC facility will be predicated upon two sections working 12-hour shifts and shall not be less than the following:

a. Control tower. Three qualified controllers, of which one shall be the shift supervisor. (A minimum of one facility rated controller is required.)

b. GCA. Same as *a*, above.

c. FOC. Same as *a*, above.

d. FCC. Same as *a*, above.

Note. The preceding minimum shift requirements do not preclude reducing the actual shift manning for periods when it is definitely known that the flying activity will be discontinued or when physical restrictions of mobile equipment dictate otherwise.

SECTION 300

FACILITY ADMINISTRATION

310. GENERAL

311. Facility and personnel appearance.

311.1 The appearance of each ATC facility shall reflect the high standards of the US Army at all times. The facility chief shall publish a facility memorandum outlining areas of responsibility and housekeeping requirements.

311.2 Personnel shall maintain a professional appearance at all times.

312. Duty Schedules.

312.1 Facility chiefs are responsible for developing, maintaining, and posting a current facility duty schedule. (Shift supervisors shall be denoted on duty schedules.)

312.2 All controllers, including supervisors, shall become familiar with and prepared for the functions of any position to which they may be assigned before assuming responsibility for that position. Additionally, each controller shall—

a. Read the recent information file and any other operational data that may be specified by the ATC/facility chief or shift supervisor.

b. Obtain a briefing on existing communications, traffic conditions, and current/forecast weather.

c. Accept responsibility for the position only after assuring, to extent possible, that the briefing is complete and that no unresolved questions pertaining to the operation of the position remain. Controller being relieved is responsible for the completeness and accuracy of this briefing.

313. Operating initials.

313.1 Controllers shall be assigned individual two-letter operating initials for use when the identity of the controller is necessary for record purposes. ATC/facility chief shall assign and maintain a listing of individual two-letter operating initials for assigned controllers.

313.2 Except where signatures are required, operating initials shall be used on all operating forms, radio, and interphone lines, flight data records, marking of tapes, and for other record purposes.

314. Time standards.

314.1 All ATC facilities shall use Greenwich Mean Time (GMT) on a 24-hour basis for entries on all forms, logs, written records, and in radio and landline communications. Local time shall be used for facility duty schedules, daily traffic counts, and other administration forms and correspondence.

315. Area of nonvisibility from control towers.

315.1 Where portions of the movement area or traffic pattern are not visible from the tower, supervisory personnel of the airfield and tower should collaborate, as required, to disseminate this information locally. ATC/facility chief shall continually review published information about this subject and revise it as necessary. Recommended wording for notices and/or sample phraseology is as follows:

"NOT VISIBLE FROM TOWER, USE OF THIS AREA IS AT PILOT'S DISCRETION."

316. Security Control of Air Traffic and Air Navigation Aids (SCATANA) Procedures (United States, Territories, and Possessions Only), AR 95-21.

316.1 The basic plan (unclassified) for the security control of military and civil air traffic and control of certain Federal and non-Federal air navigation aids is set forth in AR 95-21. ATC/facility chiefs shall ensure that ATC personnel are familiar with this regulation.

317. Flight progress strips.

317.1 Flight progress strips shall be used as outlined in FAA Handbook 7110.65.

317.2 Flight progress strips shall be requisitioned from USAATCA Aeronautical Services Office (ASO) or the appropriate Aeronautical Services Detachment (ASD) as outlined in AR 95-14.

317.3 Flight progress strips shall be filed daily and retained for 15 calendar days.

318. Air traffic activity.

318.1 The ATC/facility chief is responsible for the air traffic activity count in accordance with AR 95-24.

318.2 The VFR air traffic activity count will be determined using the mechanical or electronic counters listed in section 400. The IFR air traffic activity count will be determined from flight progress strips.

318.3 Accurate air traffic activity counts are essential since they have a direct impact on—

a. NAVAID authorizations.

b. ATC facility manning.

c. Airfield/heliport aviation facilities.

318.4 Traffic count information shall be made available to the appropriate FAA air route traffic control center (ARTCC)/approach control facility when requested by the chief controller.

320. Reference Material and Miscellaneous Instructions

321. General.

321.1 ATC/facility chiefs shall be responsible for establishing and maintaining complete, current sets of maps, charts, reference files, and other documents required for proper and efficient conduct of facility operations.

321.2 Reference files shall be arranged in looseleaf binders, labeled as to contents, and kept in a bookcase or rack.

321.3 Maintenance and disposition of ATC functional files will be in accordance with AR 340-18 series.

322. Charts and maps.

322.1 Each ATC facility shall maintain—

a. Current flight information publications. (See appendix D for requirements.)

b. A facility status chart depicting the area controlled by the facility to include NAVAIDS, frequencies, locations (bearing and distance), and current status.

c. Crash grid map.

d. Current sunrise and sunset tables.

322.2 In addition to above, control tower shall maintain—

a. Airfield diagram (runways, ramps, blind spots, ILS critical areas, helipads, etc).

b. Intersection takeoff diagram. At locations where intersection takeoffs are authorized by airfield authorities, prepare diagram as follows:

(1) Indicate the remaining runway length from each intersection from which takeoffs are authorized. Measurements shall be obtained from authentic sources and recorded on diagram in hundreds of feet (reduced to lowest hundred feet) using two or three digits. For example, 4,000 feet equals 40; 10,000 feet equals 100.

(2) If takeoffs are not authorized from certain intersections, so indicate on diagram. Example: NO TAKEOFF.

(3) If practicable, intersection takeoff diagram may be combined with the airport diagram.

c. Visibility checkpoint charts (if required). If an Air Weather Service (AWS) unit is serving the airfield, the AWS will provide these charts or diagrams. When no AWS unit is present, a physical site survey is the best way to select and measure visibility markers. When a physical survey is impractical, use maps or photo surveys.

d. Crosswind component chart for locally based aircraft.

e. Any additional drawings, charts, or maps needed (for example, standard instrument departure (SID), circuit diagrams, etc).

322.3 In addition to material listed in 322.1 above, terminal radar facilities shall maintain—

a. A runway diagram of each airfield serviced by the facility.

b. MVA chart which covers operational range of the primary radar system.

c. A looseleaf binder or other suitable display file shall be available for each operating position to provide each controller with an immediate source to confirm data, or to obtain little-used information.

(1) ATC/facility chiefs will determine material which is applicable to each operating position.

(2) All local procedures and/or instructions which supplement handbook material and/or are pertinent to an operating position will be identified, defined, and maintained (for example, arrival control position file would reference letters of agreement, operations letters, etc.) which would affect arrival control procedures. Suggested and mandatory items are as follows:

(*a*) Pertinent extracts from SOP.

(*b*) Listing of NAVAIDs within a 100-mile radius; include ID, frequency, and bearing and distance from facility. (Mandatory.)

(*c*) Pertinent NOTAM.

(*d*) Listing of suitable airports, as determined by facility chief, to include runways, type surface, lighting service, and distance and bearing from facility. (Mandatory ARAC.)

(*e*) Any drawings, charts or maps (such as SID, etc).

(*f*) SCATANA procedures. (Mandatory CONUS ARAC.)

(*g*) Photographs or diagrams of video map superimposed over radar ground returns to assist in determining accuracy of scope alinement.

(*h*) Airfield emergency instructions (such as, in-flight emergencies, hijack, etc).

(*i*) Photographs of radar scopes adjusted to optimum.

(3) Operating position files may combine information for more than one position provided each position has ready access to the file.

322.4 In addition to material listed in 322.1 above, FOC/FCC shall maintain—

(a). A current NOTAM file for all airfields within the facility area of operation.

(b). Current weather for the facility operating area.

323. Facility reference file.

323.1 The ATC/facility chief is responsible for establishing and maintaining a complete reference source of written material, required for the administration of the facility's operation. This file shall be maintained in the ATC/facility chief's office.

323.2 The facility reference file shall include as a minimum that material listed in appendix D. Additionally, this file should contain copies of FTMs, SOPs, operating manuals, and other material of value

to controllers and/or the operation of the facility. Material in this file shall be made available for off-duty study.

323.3 At dual ATC facilities (for example, tower/ARAC, tower and GCA) all facilities may use one facility reference file. However, separate files may be justified because of geographic separation.

324. Controller training file.

324.1 The ATC/facility chief shall establish and maintain current and adequate ATC reference material to support the FTP. Appendix D lists the minimum documents required to support ATC training.

324.2 The controller training file shall be maintained in an appropriate training area and shall be available for on- and off-duty study.

324.3 Dual ATC facilities shall maintain a separate controller training file.

324.4 The ATC/facility chief shall ensure that additional training documents (AR, FM, TM, etc) required for skill qualification test (SQT), are on hand at the local library services. This may be accomplished by apprising the local technical or special library of the documents required and requesting they order and maintain such documents on a checkout basis for local ATC personnel.

325. Daily operating file.

325.1 Publications listed in appendix D are required to support daily operations and shall be maintained in a location readily available to facility operating positions.

325.2 Dual/multiple ATC facilities/complexes shall maintain a separate daily operating file.

325.3 Facility reference file shall serve as the daily operating file when the ATC/facility chief's office and the facility operations are located in the same room.

326. Recent information file.

326.1 The ATC/facility chief shall maintain a folder, clipboard, or binder for posting newly received information pertaining to facility operations or personnel. It shall be located in the facility operations room, or, where provided, in the controller briefing room.

326.2 ATC/facility chief shall ensure that all personnel have read and understand all new directives, changes, or material. When all controllers have initialed this material, it shall be removed and disposed of as necessary.

330. Letters of Agreement, Operations Letters, and Facility Memoranda

331. General.

331.1 Letters of agreement, operations letters, facility memoranda documents, administrative and operational procedures applicable to a specific facility, group of facilities, or to all facilities within a specified geographical area.

332. Letters of agreement.

332.1 Letters of agreement between the US Army and a host nation or other services; between ATC detachments and host post, camp, or station, between centers; between centers and towers; between centers and terminal radar facilities; and/or towers and terminal radar facilities on the same airfield or different airfields, are prepared when it is necessary to—

a. Define interfacility or interagency responsibilities and coordination requirements.

b. Define ATC services provided the host post, camp, or station and delegate extent of operational control of ATC personnel.

c. Establish or standardize operating methods.

d. Describe special operating conditions or specific ATC procedures.

e. Delegate areas of control jurisdiction and conditions of use.

f. Describe procedures or minima not contained within FAA Handbook 7110.65, this manual, or other pertinent directives.

332.2 The ATC/facility chief responsible for developing a letter of agreement shall take the following action:

a. Ensure that letters of agreement are properly prepared and coordinated with the airfield commander or USACC agency/detachment commanders or ASD before any other coordination, as appropriate. All letters of agreement with a host country will be coordinated with the ASD before they are signed.

b. Confine the material in each letter to a single subject or purpose.

c. Describe the responsibilities and procedures applicable to each facility and organization involved.

d. Attach charts or other visual presentations to depict the conditions of the agreement, when appropriate.

e. Delegate responsibility for control of air traffic by describing the area within which the responsibility is delegated defining the conditions governing the use of the area, specifying the details of control procedures to be used, and specifying communications and coordination procedures, where necessary.

f. Coordinate with USACC agency/detachment commanders, ASD, and/or other facilities, agencies, and authorities, as appropriate.

g. Forward proposed letters of agreement with FAA to the appropriate Department of Army Regional Representative (DARR). (DARR shall review, coordinate as required, and return letters of agreement to originator with comments.)

h. Prepare the letter in final form.

i. Establish an effective date which allows participating facilities/agencies to familiarize personnel and complete other preimplementation actions.

j. Obtain signatures of all authorities required.

k. Distribute copies of the signed letter in accordance with the distribution indicated in the letter.

332.3 A change in requirements for any party signing the agreement necessitates a rewrite of the letter. Coordination shall be the same as for the original letter.

332.4 ATC/facility chief shall review and update all letters of agreement at least once annually, commencing with the effective date of the letters, to ensure timeliness and conformance with current policies and directives. Review will be annotated with date and signature of all parties concerned.

332.5 The following example shall be used to the fullest extent possible.

333. Operations letters.

333.1 Operations letters between ATC facilities, or between an ATC facility and other Army agencies located on the same airfield/heliport, are prepared to—

a. Supplement established operational or procedural instructions.

b. Establish or standardize operating methods.

c. Describe special operating conditions or specific ATC control procedures.

d. Establish responsibilities for operating airfield equipment, providing emergency services, and reporting operating limitations and hazards.

333.2 The ATC/facility chief responsible for developing an operations letter shall take the following action:

a. Ensure that the operations letter is properly prepared and coordinated with the airfield commander or USACC agency/detachment commander before any other coordination, when appropriate.

b. Confine the material in each letter to a single subject or purpose.

c. Describe the responsibilities and procedures applicable to each facility and organization involved.

d. Inclose charts or other visual presentations to depict the conditions of the letter, when appropriate.

e. Delegate responsibility for control of aircraft, when necessary, by describing the area within which the responsibility is delegated, defining the conditions governing the use of the area, specifying the details of control procedures to be used, and specifying communications and coordination procedures.

f. Coordinate with USACC agency/detachment commanders or ASD, other facilities, agencies, or authorities as required.

g. Prepare the letter in final form.

h. Establish an effective date which allows participating facilities and agencies to familiarize personnel and complete other preimplementation actions.

i. Sign the letter and obtain signatures of other authorities as required. A copy will be retained by all parties concerned and will be reviewed annually for currency or change as required. Annual review will be annotated with date and signatures of all parties concerned.

333.3 A change in the requirements for any party signing the agreement necessitates a rewrite of the letter. Coordination and processing shall be the same as for the original letter.

333.4 The following example shall be used to the extent possible as the standard format for an operations letter.

EXAMPLE: Format for Approach Control/GCA Letter of Agreement

Letter of Agreement Between _____ (Name) Approach Control

and _____ (Name) GCA

_____ (Name) Approach Control Letter No._____

_____ (Name) GCA Letter No._____

SUBJECT: Radar Control of IFR Arrivals at _____ (Name) Airfield

EFFECTIVE: _____ (Effective date of letter)

_____ (No. and date of canceled letters)

This agreement governs the control of IFR arrivals at _____ (Name) airfield.

1. Conventional aircraft.
   Primary and secondary fixes.
2. Jet aircraft.
   Procedures for release to GCA during published instrument approaches.
3. Diverse approach.
4. Missed approach.
5. Coordination (transfer of information between facilities).

Attachments (list as required)

_____ (Signature) _____ (Signature)

DISTRIBUTION:

Figure 3-1. Example of format for approach control/GCA letter of agreement.

EXAMPLE: Format for Control Tower/Airfield Operations Letter.

Operations Letter between _____ (Name) Airfield Operations and _____ (Name) Control Tower.

_____ (Name) Airfield Operations Letter No. _____

_____ (Name) Control Tower Letter No. _____

SUBJECT: (Short descriptive statement of the letter's content.)

EFFECTIVE: (Effective date of the letter.) (No. of canceled letters.) (Use standard paragraph to outline the text of the letter. Provide sufficient detail to preclude misunderstanding of the procedures, responsibilities, required coordination, etc, intended.)

_____ (Signature)
Airfield Operations Officer

_____ (Signature)
ATC/Facility Chief, Tower

_____ (Name) Airfield.

DISTRIBUTION:

Figure 3-2. Example of Format for Control Tower/Airfield Operations Letter.

334. Facility memoranda.

334.1 Facility memoranda shall be issued when it is necessary to regulate and standardize the internal operation of a facility. They contain instructions pertaining to temporary administrative or operational practices and procedures within the facility. Do not issue a memorandum as a joint document applicable to two or more facilities.

334.2 Standard letter format shall be used when preparing facility memoranda. They are signed by the ATC/facility chief.

340. Facility Operating Forms

341. General.

341.1 Personnel shall exercise care in the preparation of all forms to ensure neat and accurate entries. These forms are a part of the facility's official records and may be referred to at any time by authorized personnel or agencies.

341.2 Whenever practicable, entries should be typewritten; however, printed ink entries are permissible. Do not erase or strike over any entry. When it is necessary to correct an entry, type or draw a line through the incorrect portion and continue with the correct wording or entry. The controller correcting the error shall initial the correction.

342. DA Form 3501-R (GCA Operations Log).

342.1 Use this form to record air traffic in GCA facilities. This form shall be initiated at the beginning of each calendar day (0000 local time or whenever the facility begins operation for the day). Entries shall be in GMT. ATC/facility chief shall review each DA Form 3501-R and sign authenticating block. If more than one form is required to log daily activities, pages shall be consecutively numbered and stapled together. Daily totals shall be entered on the final form (app E).

342.2 DA Form 3501-R is filed daily with DA Form 3502-R (Daily Report of Air Traffic Control Facility (app F)) and retained for a period of 3 calendar months.

342.3 Fill out DA Form 3501-R as follows:

Item 1. Self-explanatory.

Item 2. Self-explanatory.

Item 3. Self-explanatory.

Column a. Insert a checkmark (✓) in the applicable column.

Column b. Self-explanatory.

Column c. Self-explanatory.

Column d. Self-explanatory.

Column e. Low approach (LA); full stop (FS); touch-and-go (TG); or other type of approach.

Column f. Operating initials of the controller conducting the surveillance portion of an approach.

Column g. Operating initials of the controller conducting the final portion of a surveillance approach.

Column h. Operating initials of the controller conducting the final portion of a precision approach.

Column i. Operating initials of the controller monitoring an approach.

Column j. Operating initials of the controller monitoring a departure.

Column k. Operating initials of the controller conducting a simulated approach.

Column l. Self-explanatory.

Column m. Remarks—missed approach (MA), other control instructions.

Note. Data considered irrelevant may be eliminated when conducting simulated approaches unless it satisfies a training requirement. (For example, items *a*, *d*, *l*, and *m* may be omitted.)

342.4 ARAC facilities shall use flight progress strips in lieu of DA Form 3501-R to record air traffic movements. All flight strips shall be retained for 3 calendar months. Appropriate entries shall be made on flight strips to indicate which controllers conduct the approaches (that is, ASR/PAR).

343. DA Form 3502-R (Daily Report of Air Traffic Control Facility).

343.1 All Army ATC facilities shall use DA Form 3502-R to record daily activities. This form shall be initiated at the beginning of each calendar day (0000 local time or whenever a facility begins operations for the day). Entries shall be in GMT (app F).

343.2 Supervisory responsibility shall be indicated in the remarks section using assigned operating initials (for example, SL assumes shift supervisor responsibilities; SL departed facility; PS assumes shift supervisor responsibilities). Facility chief shall review each DA Form 3502-R and sign authenticating block. All entries in the *Remarks* section of the form shall be followed by the operating initials of the individual making the entry.

343.3 Authorized Army, FAA, and International Civil Aviation Organization (ICAO) abbreviations and phrase contractions may be used for entries on the form.

343.4 Make entries as necessary to describe all abnormal conditions, unusual occurrences, or times of interest (for example, equipment outage, incidents or accidents, unsafe conditions, etc). If a requirement exists for recording on- and off-duty times for pay purposes, use the reverse side of the form.

343.5 This form is filed daily and retained for a period of 3 calendar months.

344. DA Form 3503-R (Air Traffic Control Position Log).

344.1 DA Form 3503-R is used to record personnel changes at each operating position within an ATC facility. It is initiated at the beginning of each calendar day (0000 local time or whenever a facility begins operations for the day). Additional pages shall be used as necessary to complete the day (2400 local time or whenever a facility terminates its operations for the day). Positions shall be identified by entering the appropriate controller position initials (para 221.2) (app B).

344.2 Controllers assigned responsibility for an operating position are responsible for initiating DA Form 3503-R. If a trainee is assigned to the position, his initials, followed by a slant mark (/), and the facility rated controller's initials shall be entered.

344.3 DA Form 3503-R is filed daily with DA Form 3502-R and retained for a period of 3 calendar months.

350. Handling Aircraft Accidents and Incidents

351. General.

351.1 Involvement of components of the Army ATC system in an aircraft accident or incident may include—

a. Pilot irregularities or deviations from established procedures which require special handling by controllers (for example, given priority) resulting in delay or resequencing of other aircraft.

b. Operational errors involving equipment failure, personnel, procedures, or other system components, individually or in combination, which result in a deviation from established ATC standards.

c. Near collisions reported to a facility by the pilot of an aircraft involved.

351.2 Whenever a facility, service, or navigational aid is, or is suspected to have been, involved in an aircraft accident or incident, action shall be taken to—

a. Provide for continuing safe, orderly, and expeditious movement of all air traffic operating under the jurisdiction of the ATC facility.

b. Obtain accurate and complete information for use as the basis for detailed investigations by the ATC/facility chief, other agencies, or higher headquarters.

352. Responsibilities.

352.1 Following an aircraft accident or incident, the shift supervisor shall—

a. Notify the ATC/facility chief and other designated personnel.

b. Call the weather observer and request that a local weather observation be taken unless there has been an intervening record or record special observation.

c. Remove and safeguard any recording tapes which are, or may be, pertinent to the accident or incident.

d. Record all appropriate details, including the local weather observation, on DA Form 3502-R.

352.2 As soon as possible after notification of an accident or incident, the ATC/facility chief or his designated representative shall—

a. Relieve the controller for physical/psychological evaluation by the local medical officer/flight surgeon if there is the slightest indication that the controller contributed to the accident or incident. (The controller shall not be returned to duty until a clearance is obtained from the local medical officer/flight surgeon.)

b. Obtain a written statement from the controller and supervisory personnel involved.

c. Together with technically qualified personnel, examine operating characteristics and equipment condition to determine whether the equipment could have contributed to the accident or incident.

353. Accidents or incidents involving radar facilities.

353.1 When a radar facility is, or is suspected to have been, involved in an accident or incident, the facility shall discontinue providing radar service as indicated below:

a. During VFR weather conditions, discontinue radar service until ATC/facility chief or shift supervisor and a qualified radar technician have determined that radar equipment is operating satisfactorily. If satisfactory results are not obtained, NOTAM action should be initiated stating "radar out of service."

b. During IFR weather conditions (NOTAM action

should be initiated stating "radar out of service"), discontinue radar service, except—

(1) When inbound or holding aircraft cannot land by use of other facilities or proceed to an alternate and the pilot has been informed and concurs in the use of the equipment under these conditions.

(2) Under conditions requiring the use of a radar facility that has possible damage, without other landing choices, and after the shift supervisor's check of radar equipment before continuing radar service.

354. Retention of accident or incident records.

354.1 Written and recorded records pertaining to an aircraft accident or incident shall be retained for a minimum of 6 months in the ATC facility (para 453.2, 453.3, and 453.4).

355. Reports.

355.1 Aircraft accidents or incidents involving, or suspected to have involved, ATC services, facilities, or NAVAIDS shall be reported according to DA directives (AR 95-12, 105-3, and 385-40).

355.2 Controllers witnessing operational hazards (procedural or material) to safe ATC practices shall immediately submit an Operational Hazard Report (OHR) (DA Form 2696) to their supervisor. The ATC/facility chief shall ensure that blank OHR forms are on hand and that completed report forms are correct, complete, and submitted through the USACC agency/detachment commander to the local aviation safety officer or airfield operations officer and through channels to Commander, USACC, ATTN: CC-ATC/AVN, Ft Huachuca, AZ 85613. An information copy of the submitted OHR shall be retained at the facility until final action has been completed; at which time it will be destroyed. The FTP shall include instructions for the preparation and submission of an OHR.

360. Release of Information

361. Policy and responsibility.

361.1 Information pertaining to an aircraft accident or incident shall be made available only to official safety investigation teams. The airfield commander and the ATC/facility chief are responsible for compiling and releasing this information.

362. Removal of original records.

362.1 Records of any type, recorded or written, concerning accidents or incidents shall not be released from facility custody without proper authority. This responsibility rests with the ATC/facility chief; however, it will not be released without proper coordination between the airfield commander and appropriate USACC agency/detachment commander.

362.2 The policy stated in 362.1 above does not preclude making copies of the original voice recording for use by persons officially concerned. Copies may be made immediately for, or by, investigation personnel, and they may transcribe from these copies pending availability of the original facility transcript. The original recording must remain in custody of, and be safeguarded by, the custodian.

362.3 When transcripts pertaining to an accident or incident are necessary or when additional copies of original tape recordings are required, they may be made from the original tape recording. Playback and handling of the original tape recording must be kept to an absolute minimum if local duplication is not possible. When making transcriptions—

a. Include in the reproduction all data pertinent to the accident or incident from at least 5 minutes before the initial contact to at least 5 minutes after the last contact.

b. Use a direct electronic connection between the playback and the recording equipment to accomplish this re-recording. Do not use the speaker-to-microphone method during the re-recording process, except where a direct electronic connection is not possible.

c. Personnel supervising the reproduction process shall preface the copy or separate portions of the copy, if several channels are recorded, with a statement containing the information normally furnished at the beginning of written transcriptions. (See 363.1 below, except omit the abbreviations mentioned in 363.1*c*.) Include—

(1) The date and time the reproduction was made.

(2) The name of the person supervising the reproduction.

(3) A certification that the reproduction is a true copy of the original recording.

363. Transcription preparation and handling.

363.1 When authorized, use DA letterhead as the first page of each transcription. Include the following information:

a. Subject.

b. Identity of the recording facility.

c. List of facilities making transmissions, together with the abbreviation for each, as used in the body of the transcript.

d. Frequency, landline, or position being recorded.

e. Date and period of time covered by the transcript.

f. Mark complete transcript FOR OFFICIAL USE ONLY (SPECIAL HANDLING REQUIRED) (AR 340-16 and 340-17).

g. Certification.

363.2 ATC facilities indicated in the transcription shall be abbreviated by use of appropriate location designator, followed by ARTCC, TWR, APC, ARAC, GCA, FOC, or FCC. Aircraft may be identified by an abbreviated call sign when confusion will not result.

363.3 Use the following format in typing the transcription.

a. Precede each transcription with the identity of the transmitting station. When the station is unknown, UNK shall be used.

b. Single space the body of the transcription.

c. Separate each contact from the next contact by double spacing.

d. Show breaks in continuity of contact through use of a series of asterisks; garble as such; otherwise the transcription shall be verbatim.

e. Where time code generator systems are installed, make time entries to nearest second preceding each transmission at approximately 1-minute intervals in the body of the transcript.

363.4 Certify the transcription as follows:

As custodian of the original recording, I hereby certify this to be true and exact (copy/transcript) thereof.

_____
(Name)

_____
(Grade)

_____
(Title)

364. Certified copies of records.

364.1 When copies of written records are required, each shall be certified as follows:

I hereby certify this to be a true and exact copy of the original record on file at this office.

_____
(Name)

_____
(Grade)

_____
(Title)

370. Weather Observations

371. Cooperative weather reporting. Accurate weather observations and timely dissemination thereof are essential to safe and efficient aircraft operations. Tower controllers shall, therefore, maintain a "cooperative weather watch" and advise the AWS observer of any differences between observed (by the controller) and reported (by the weather observer) weather conditions that may affect flight safety.

371.1 Control tower operators are not specifically required to take and pass on limited weather observations. However, if a cooperative weather watch can be provided without degradation of a controller's primary duties and will enhance the overall ATC mission, service may be provided. Letters of agreement shall be developed spelling out specific commitments concerning reporting limited weather observations between originating and receiving stations.

371.2 Weather information forwarded may contain ceiling and visibility provided training and certification of limited weather observer has taken place, is documented, and official charts are available for ceiling and visibility. Temperature and dew point will only be reported if direct reading instruments are available.

371.3 Further dissemination of other than controller to pilot or controller to AWS of this limited weather observation shall be on an unofficial basis only.

371.4 Report of limited weather observations by Army tower controllers shall be considered an additional service. Therefore, reporting limited weather observations to AWS at specified time intervals shall be on a traffic-permitting basis. Same shall hold true for special limited weather observations.

371.5 Retain written record of forwarded limited weather observations for 15 days.

372. Relay of observations. Controllers shall relay current weather observations in accordance with FAA Handbook 7110.65. Tower controllers shall also advise terminal radar facilities of any observed weather phenomena not included in the current weather sequence.

373. Use and display of weather data.

373.1 ATC/facility chiefs shall implement procedures to ensure timely receipt of weather information, to include local observations and forecasts, weather warnings, meteorological watch advisories, weather radar reports, and pilot reports.

373.2 The shift supervisor on duty shall ensure that current weather data is displayed so as to be legible from all controller positions.

374. Posting weather data.

374.1 Post weather data on 5" x 8" note pads or on the reverse side of flight progress strips. Weather data received on autowriters, teletypes, or similar weather dissemination systems need not be transferred to other forms provided it is legible from all controller positions.

374.2 Use standard weather symbols and abbreviations. Include time of receipt and initials of the provider when dissemination is by voice.

374.3 When the provisions of 374.4 below cannot be met, note pads and flight progress strips used to record daily weather information will be filed and retained for 15 days.

374.4 Weather information received by direct reading equipment, teletype, or other weather dissemination systems need not be recopied and filed if there is a letter of agreement between the official weather reporting station and the facility to the effect that the weather station will maintain this file and make it available to the facility as needed.

375. Estimated altimeter settings.

375.1 Estimated altimeter settings which are included in surface weather observations or received from adjacent weather stations may be transmitted as

"estimated" (for example, altimeter estimated 30.01). However, in accordance with FAA Handbook 7110.65, they are not to be considered as "current."

375.2 Additionally, estimated altimeter settings shall also be issued when they are based upon an aneroid instrument which has not been compared routinely in accordance with paragraphs 421.2*b* and 421.4/5.

375.3 Automated radar terminal systems (ARTS) facilities shall ensure that estimated altimeter settings are not input to an operational computer.

380. DA Form 3479-6R (ATC Facility Personnel Status Report)

381. Procedures for submitting report.

381.1 This report will be prepared on DA Form 3479-6R (ATC Facility Personnel Status Report) (app G). This form will be reproduced locally on 8″ x 10½″ paper.

381.2 Reports will be prepared by all units authorized/assigned US Army ATC personnel.

381.3 Report shall be prepared and submitted within 5 work days of the end of each calendar month.

381.4 Reports will be forwarded directly to Commander, US Army Air Traffic Control Activity (USAATCA), ATTN: CCQ-SYS-P, Ft Huachuca, AZ 85613, with copies to appropriate major commands and ASD.

SECTION 400

FACILITY EQUIPMENT AND OPERATING PROCEDURES

410. General

411. Equipment layout.

411.1 Standard equipment layouts of all facilities are contained in TB 95-1.

412. Standards.

412.1 The standards contained herein are in addition to instructions contained in other applicable directives.

413. Emergency lighting in facilities.

413.1 Provisions shall be made to provide emergency lighting in all ATC facilities. An automatic battery powered system is desirable; however, two serviceable flashlights, readily accessible to the controller, may be used to satisfy this requirement. When backup power with automatic changeover is provided and power can be transfered within 15 seconds of power failure, the requirement for automatic battery-powered system or flashlights shall be deleted.

413.2 When flashlights are provided, ATC/facility chiefs shall establish procedures to ensure that they are serviceable at all times.

414. Facility clocks.

414.1 A reliable clock shall be visible from each position of operation in each ATC facility. Clocks shall be checked at the beginning of each shift and shall be adjusted as follows:

a. In approach control facilities, clocks are set to agree with those of the enroute facility responsible for the terminal facility.

b. In all other facilities, clocks are set to agree with the approach control facility serving the airfield.

c. At locations not serviced by an enroute/approach control facility, clock settings shall agree with time signals received by radio directly from a US Government source or a friendly foreign government, whichever is practicable.

414.2 Results of time checks shall be entered on DA Form 3502-R.

415. Equipment checks.

415.1 As soon as possible after assuming responsibility for facility operations, the shift supervisor shall ensure that applicable equipment checks are performed and results of checks recorded on DA Form 3502-R on the following:

a. Radio equipment. When practicable, radio checks should be made with airborne aircraft or another ground facility.

b. Weather disseminating systems.

c. Surveillance radar and identification, friend or foe (IFF)/selective identification feature (SIF). Whenever practicable, checks shall be made with live targets and include all required features of the equipment.

d. Scope and cursor alinement on precision radar equipment.

e. Tower/radar coordination system.

f. Automatic terminal information service (ATIS).

g. NAVAID monitors.

h. Recording equipment.

i. Video mapping and/or map overlays.

415.2 Light guns shall be checked at the beginning of each shift and the results entered on DA Form 3502-R; special light gun requirements are as follows:

a. Color codes and meaning shall be attached to the back of the light gun.

b. Except when in actual use, light guns shall be adjusted to provide a red light when the switch is activated.

415.3 In addition to the checks required in 415.1 above, ATC/facility chief shall establish procedures to ensure the following checks are performed once daily and results of the checks are recorded on DA Form 3502-R.

a. Primary crash alarm system.

b. Emergency frequencies 121.5 Megahertz (MHz) and 243.0 MHz. Checks of these frequencies should be made during the midnight shift or other periods of light traffic. In areas where there are two or more airfields in close proximity, one facility shall be designated to initiate the checks.

416. Calibration of altimeter setting indicators and aircraft altimeters.

416.1 Altimeter setting indicators used in ATC facilities shall be calibrated in accordance with TB 9-6660-275-50. They shall also be checked whenever inaccurate operation is evident or suspected.

416.2 Aircraft altimeters authorized in mobile control towers shall be rotated to ensure that one is undergoing inspection and calibration at all times.

417. Radar/NAVAIDS emergency warning and evacuation.

417.1 ATC/facility chief shall ensure that local SOP contains instructions for alerting radar/NAVAIDS personnel of any ATC situation which may

present an imminent hazard to ground personnel in these facilities.

418. Magnetizing of indicators.

418.1 The instrument face covers should be cleaned by using a soft cloth dampened with a mild detergent and water solution and wiped dry with a soft, scratch-free type cloth. Cleaning instrument face covers with dry cloth or tissue can result in static charges on the glass or plastic which will magnetize the instruments and cause serious errors in the readings or indications. Equipment in this category includes wind direction and velocity indicators, clocks, radar and television indicators, and direct reading altimeters.

419. Sky Genie.

419.1 The following guidelines are established for the training and use of Sky Genie equipment.

a. Training on the operational techniques and use of the Sky Genie shall be conducted before general use by ATC facilities.

b. After installation of equipment, training classes will be included in the facility training program.

c. Sky Genie proficiency testing shall be conducted during the normal semiannual testing period. Video tapes and 16 millimeter training films are available from major command headquarters.

d. Basic procedures for operation and storage of the Sky Genie equipment are—

(1) A secure structural beam will be identified and marked on two sides of the tower to which the rope will be secured.

(2) The rope shall be wrapped a minimum of three turns around the Sky Genie.

(3) The ropes shall be kept in a Sky Genie case (rolled to prevent tangles) and stored inside the tower cab. The Sky Genies shall be operationally attached to the ropes at all times.

(4) Not more than four Sky Genies will be attached to each rope.

(5) All training will be conducted under the direct supervision of an individual who is fully qualified and proficient in the use of the Sky Genie.

419.2 A training program for the Sky Genie should include a multiple phase program in which the individual exits from a beginner's level similar to airborne basic training. Progressive training may thereafter progress up to the ultimate point for descent.

419.3 Practical training does not require an actual descent from the tower or other applicable points of descent, except on a voluntary basis.

419.4 It is required that each individual controller be knowledgeable in the use of the equipment.

419.5 Sky Genie test results will be entered in section V, DA Form 3479-R.

420. Towers and Nonradar Approach Control

421. Tower equipment.

421.1 In addition to the equipment requirements stated in TB 95-1, each control tower shall be provided the following equipment as required.

a. Flight progress strip holders.

b. Tower/radar coordination system.

c. Binocular(s).

d. Standard VFR traffic counter(s) (mechanical or electronic).

421.2 Army ATC facilities shall use the altimeter setting—

a. Issued by the weather station serving the airfield/heliport.

b. Read directly from a properly calibrated altimeter setting indicator or aircraft-type altimeter that is routinely compared with an identical or equivalent aneroid device. Criteria on calibration and comparison standards may be obtained from the nearest AWS and once obtained shall be set forth in local SOP.

421.3 Altimeter setting indicators that are inspected and calibrated in accordance with guidance received from the AWS may be used as the official altimeter setting at those locations where local weather service support is not provided.

421.4 At facilities having only one altimeter device and no weather reporting station is at that location, comparison may be made against values obtained from adjacent weather stations provided—

a. At locations where precision approaches (ILS/PAR) are conducted, the weather station distance is not more than 10 nautical miles (NM) and the wind speed is 25 knots or less.

b. At locations conducting nonprecision approaches, the distance must not exceed 25 NM and the wind speed is 30 knots or less.

c. Comparisons are not made when weather conditions indicate the probability of a steep pressure gradient between the two locations or the elevation difference exceeds 1,000 feet.

421.5 At locations which do not meet the 10 and 25 NM limitations, a mercurial barometer, altimeter setting indicator, or anther aircraft-type altimeter is required to make comparisons.

421.6 ATC facilities providing air traffic service shall compare the official altimeter setting with their instrument setting at the beginning of each shift. Any difference shall be posted adjacent to the face of the instrument and recorded on DA Form 3502-R. The correction factor shall be applied to the reading obtained from the facility instrument before transmitting the altimeter setting to a pilot or another facility. Use of the facility instrument shall be discontinued whenever the correction factor exceeds plus or minus 0.05 inch of mercury at nonprecision approach

locations or exceeds plus or minus 0.02 at precision approach locations.

421.7 If a current altimeter setting is unavailable, tactical facilities providing air traffic service shall adjust two aircraft altimeters to indicate the actual height above MSL. The average of the two altimeter settings, as indicated in the Kollsman windows, shall be issued as estimated (for example, "Estimated altimeter, three zero zero four.").

422. Flight data.

422.1 Specific procedures for posting flight data concerning VFR flights shall be established locally and published in a facility memorandum.

422.2 Facilities receiving, relaying, or transmitting ATC clearances over landline circuits shall make a written record of these clearances on flight progress strips.

423. Approach control equipment (nonradar).

423.1 Flight progress strip holders/flight progress boards and appropriate communications control consoles are normally used to provide nonradar approach control services from the control tower cab.

423.2 Where nonradar approach control is located separately from the control tower, the following minimum basic equipment shall be provided.

a. Flight progress strip holders/flight progress boards.

b. ATC communications console.

c. Weather disseminating devices or method for displaying current weather.

424. Arrangement of postings—nonradar approach control.

424.1 Normally, only one strip will be used for each inbound or outbound flight. Where this is not practical because of the area of jurisdiction, number of fixes, airports served, etc, ATC/facility chief may establish fix designators to facilitate traffic control.

424.2 Strips shall be sequenced according to altitude level over a fix.

424.3 Strips concerning arriving aircraft shall be maintained in proper sequence until a report is received that landing is assured or that a missed approach has started. In the event of a missed approach, a new flight progress strip is prepared.

425. Postings—nonradar approach control.

425.1 Flight progress reports shall be posted directly on the appropriate flight progress strip. Additional incoming flight progress data, required by the controller, shall be posted on the flight progress strip, brought to the attention of the controller with the least possible delay, and shall be given priority handling over other types of incoming flight data.

430. Radar

431. General.

431.1 Approved radar systems may be used to provide radar service within authorized areas of responsibility.

431.2 Radar service shall be provided only when the controller has a suitable target and is personally satisfied that the presentation and equipment performance is satisfactory for service being provided. A usable target is one where return is not missed on more than two consecutive scans. From the final approach fix to the missed approach point, a target should normally be received on every scan. The above criteria establishes minimum standards for maintaining radar identification. There may be situations where the service being provided may require a usable target on every scan. Controller judgment shall be applied in these instances.

431.3 When PAR monitored ILS approaches are approved, the course and glideslope alinement of PAR and ILS serving the same runway shall coincide within 0.2 degree.

431.4 Before authorizing use of a tactical GCA to control traffic at a fixed facility, procedures shall be established to ensure that—

a. The radar set is operational and sited in accordance with the technical manuals pertaining to the equipment.

b. Controllers are qualified.

c. ATC procedures and the terminal instrument procedures for which the radar is to be used have been developed in accordance with TM 95-226 and approved for use by proper authority and flight checked under VFR conditions.

432. Radar mapping requirements.

432.1 The minimum radar mapping capability required for ARAC services is a five-channel mapper.

432.2 Grease pencil marking, plastic tape, compass rose grid lines, rangemarks, or other innovations shall not be used in lieu of an adequate map overlay or video map in radar facilities except as noted in 434.2 below.

432.3 Facility chiefs shall coordinate, as necessary, with adjacent radar facilities and the responsible authority for flight check to ensure the accuracy and adequacy of common reference points on radar maps when such points are used in providing ATC services.

432.4 To reduce scope clutter and increase operational efficiency, data on video maps should be limited to the following:

a. Airfields/heliports.

b. Runway centerline extension to a minimum of 6 miles.

c. Radio navigation and approach aids.

d. Reporting points.

e. Airway/route centerlines.

f. Boundaries (for example, control, special use

areas, terminal buffer areas, or outer fix holding pattern areas).

g. Handoff points.

h. Special use tracks (for example, scramble, recovery, SID).

i. Major obstructions.

j. Range accuracy marks.

k. Prominent geographic features (for example, islands or mountains).

l. Map alinement indicators.

433. Radar beacon (IFF/SIF).

433.1 Radar beacon decoders permit controllers to display responses from selected transponder replay codes in modes 1, 2, and 3.

433.2 SIF Mode 1 and Mode 2 replies are defined by appropriate command instructions. Controllers shall not instruct a pilot to change to, or turn off, these modes without specific approval from a responsible authority.

433.3 Existing SIF equipment does not display emergency returns without specific actions required of the controller. Until provisions are made for such features, controllers shall not be required to monitor radar indicators for emergency display possibilities except—

a. When advised by an aircraft that an emergency condition exists and that the airborne equipment is set to provide emergency returns.

b. In support of emergency situations at the request of an ATC facility or appropriate agency.

433.4 To obtain the desired display with currently installed equipment, controllers should—

a. Select only the radar beacon codes necessary to display radar beacon replies associated with his area of jurisdiction.

b. Select the raw/test position to display aircraft equipped only with IFF equipment. SIF equipped aircraft replies will appear as undecoded pulse trains when equipment is operated in this configuration.

c. When using IFF equipment, assign Mode 3 to aircraft equipped with SIF equipment.

433.5 The double code train displayed by the identification feature is designed to appear on the indicator for a period of 30 seconds after the switch on the airborne equipment is released. Controller shall not instruct a pilot to turn off this component of the airborne equipment.

433.6 When primary radar is not usable and IFF/SIF alinement has been verified, IFF/SIF returns may be used to vector aircraft to a point within PAR coverage, where the final approach commences. (Only primary radar will be used to conduct PAR approaches.) IFF/SIF returns shall not be used to conduct ASR approaches unless an emergency exists and the pilot concurs.

434. Airport surveillance radar (ASR).

434.1 To provide surveillance approaches, indicators shall be equipped with a video mapper or electronic cursor for providing means of reference to the runway centerline extended. Radar systems not equipped to provide this service shall use a map overlay in lieu of a video mapper or electronic cursor. This centerline reference shall be extended to a minimum of 6 miles.

434.2 Indicator grid lines may be used to provide an extended runway centerline during periods of temporary malfunctioning of video mapping or electronic cursor equipment.

435. Terminal radar equipment.

435.1 Each terminal radar facility shall be provided the following minimum equipment as required.

a. Surveillance and precision radar display.

b. ATC console equipment.

c. Radio receiver transmitter controls.

d. Weather dissemination devices or method of displaying current weather.

e. Tower/radar coordination system.

f. Wind direction and speed indicator.

g. Navigational aid monitor (approach control).

h. IFF/SIF.

i. Video mapper or map overlay (approach control).

j. Flight progress stripholders/flight progress boards.

436. Minimum vectoring altitude (MVA) charts.

436.1 To assist controllers with minimum IFR altitudes for vectoring and obstruction clearance criteria as set forth in FAA Handbook 7110.65 and FAR, Part 91, MVA charts shall be prepared for all ASR radar systems. The area covered shall be the maximum radar range. The appropriate DARR should be contacted if assistance is required.

436.2 Prepare vectoring chart as follows: (fig 4-1.)

a. Center of chart shall represent radar antenna site.

b. Divide chart into sectors as required by different MVAs. Configuration of sectors and features will vary with local terrain and operational considerations.

c. Sectors may be depicted in relationship to magnetic bearings from the antenna site, radials from VOR/vhf omnidirectional range tactical air navigation (VORTAC)/tactical air navigation (TACAN), or radar display range marks.

d. Sector boundaries should be coincident or compatible with map overlay or video map data.

e. Sectors should be large enough to accommodate the vectoring of aircraft within the sector at the MVA.

f. Establish Sector boundaries at least 3 miles (5 miles if 40 or more miles from antenna site) from obstruction which determines the MVA.

g. To avoid a large sector with an excessively high MVA because of an isolated prominent obstruction.

enclose obstruction with a buffer area whose boundaries are at least 3 miles (5 miles if 40 or more miles from antenna site) from the obstruction.

436.3 The minimum IFR vectoring altitude in each sector shall be determined by applying the obstacle clearance/reduction criteria set forth in FAA Handbook 8260.19.

436.4 MVA is established irrespective of the flight checked radar coverage. It is based on obstruction clearance requirements only. It is the responsibility of the controller to determine that a target return is adequate for radar control purposes.

436.5 An MVA may also be established outside of controlled airspace. When this is done, the area shall be so noted on the chart.

436.6 Ensure that MVA on charts prepared for terminal systems are compatible with vectoring altitudes established for associated radar instrument approach procedures.

436.7 Depict the MVA in each sector.

436.8 The MVA chart shall be processed as follows:

a. Use scale of an appropriate US Government chart to facilitate checking against terrain features.

b. Affix date and signature of the ATC/facility chief.

c. Forward chart to the appropriate DARR/ASD for further coordination and FAA approval.

d. Currency shall be maintained by revising chart as necessary and/or reviewing annually. Obtain DARR, FAA, or ASD certification on revisions and annual reviews.

437. Posting flight progress strips—radar approach control.

437.1 Ordinarily, only one strip will be used for each inbound or outbound flight. Where this is not practicable because of area of jurisdiction, number of fixes, airfields served, positions of operation, etc, the ATC/facility chief shall establish procedures to facilitate traffic control.

437.2 Strips shall be sequenced according to time over a fix.

437.3 Strips concerning inbound flights shall initially be posted at the approach control position of operation. The strip is transferred to the arrival controller and precision controller as handoffs are effected.

437.4 Strips concerning arriving aircraft

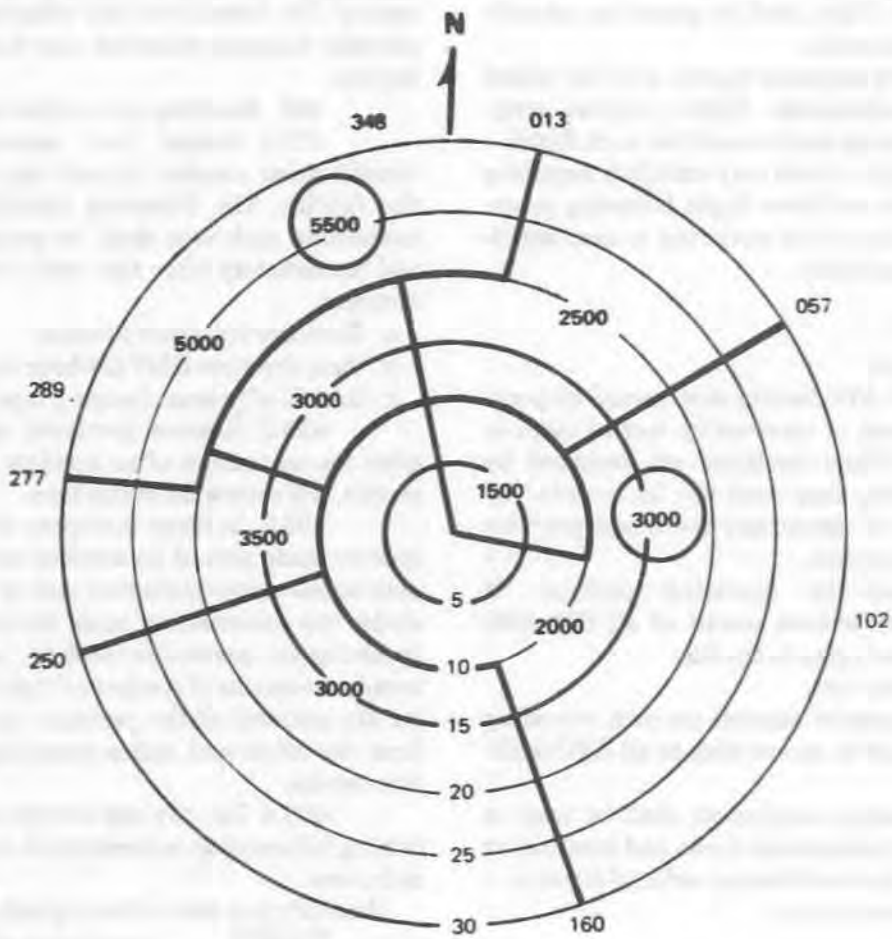

Figure 4-1. Example of minimum vectoring altitude chart.

shall be maintained in proper sequence until transfer of control is effected or report is received that landing is assured or missed approach has started.

438. Handling flight data.

438.1 In radar approach control facilities, flight progress reports shall be posted directly on the appropriate flight progress strip. Additional incoming flight progress data required by the controller shall be posted on the flight progress strip and brought to the attention of the controller with the least possible delay and shall be given priority handling over other types of incoming flight data.

438.2 In GCA facilities, all flight data shall be posted directly on DA Form 3501-R.

440. Flight Operations Center (FOC)/ Flight Coordination Center (FCC)

441. General.

441.1 The FOC/FCC facility chief shall prepare operations letters which outline areas of control responsibility to include handoff points and coordination procedures.

441.2 The FOC/FCC facility chief shall classify all landline circuits in the order of priority.

442. Flight Data.

442.1 Each flight shall be posted on an individual flight progress strip.

442.2 Flight progress reports shall be posted directly on the appropriate flight progress strip. Normally, only one strip shall be used for each flight.

442.3 Facility chiefs may establish reporting point designators to facilitate flight following procedures, with strips sequenced according to next anticipated flight progress report.

450. Recorders

451. General.

451.1 Each ATC facility shall record all pertinent data transmitted or received by way of radio or landline systems. When landlines are recorded by another ATC facility, they need not be recorded by both when a letter of agreement exists and provides for information on request.

451.2 Record by operating position. If recorder fails, make written record of all IFR ATC clearances and retain copies in the file.

452. Recorder use.

452.1 A separate channel on each recording machine shall be used to record time at all ATC facilities.

452.2 Recording equipment shall be used to record all ATC communications (radio and landline) at operating positions in the following order of priority.

a. Precision approach radar.
b. Arrival control.
c. Approach control.
d. Departure control.
e. Local control.
f. Flight data (tower).
g. Clearance delivery.
h. Ground control.
i. Flight data (radar).
j. Coordinator.
k. Supervisor.

452.3 After the requirements of 452.2 above are met, the remaining spare channels shall be used to clear channel record the primary radio transmit/receive frequencies in the following order of priority.

a. VHF and UHF emergency.
b. Primary crash net.
c. Approach control (radar or nonradar).
d. Departure control.
e. Local control.
f. Ground control.

452.4 When additional operating positions are implemented in a facility, recorder channels assigned to functions in 452.3 above shall be released in reverse priority to record the newly established position(s).

452.5 The desirability of recording individual frequencies shall not be construed as justification for additional recorders to accomplish recording by frequency. The intent is to take advantage of any unused recorder channels whenever they may be available at a facility.

453. Handling of recorder tapes.

453.1 Assign and attach a permanent identification number to each tape reel in service in the facility. The following identifying information concerning each tape shall be posted directly on the reel immediately after that reel is removed from the recorder.

a. Recorder transport position.
b. Date and time GMT (24-hour clock).
c. Initials of person changing tape.

453.2 Remove pertinent tapes immediately after the occurrence of an accident or incident, label, certify, and secure the entire tape.

453.3 In those instances when recorder tape is to be made part of an accident or incident file, it is only necessary to retain that part of the tape which includes the conversation made during the time period involving the particular incident, plus an initial and terminal overrun of 5-minutes' tape running time. After the removal of the pertinent portion of the tape from the whole reel, splice remaining tape and return it to service.

453.4 Identify and certify removed tapes containing information concerning an accident or incident as follows:

I certify that this is the original recording made in _____(facility)_____ containing all conversation on _____(channel)_____ at _____(position)_____ pertaining to _____(accident or incident)_____ on

(date)
(Name) (Title)

454. Checking recorder operation.

454.1 Quality of the recordings is monitored by controller personnel. To ensure that usable recordings are being made, facility chief/shift supervisors shall—

a. Ensure, at the beginning of each shift, that all recording channels are operating properly and are producing clear, audible recordings.

b. Perform periodic checks of recorder operation during each shift whenever practicable.

c. Ensure that entries are made on DA Form 3502-R to indicate results of these checks.

454.2 Controller personnel shall perform the recorder checks in those facilities where recorders are installed in or convenient to the operations room.

454.3 At those facilities where controller personnel are not available for checking or changing recorder tapes or the recorders are installed in equipment rooms remote from the operations room, the ATC/facility chief shall coordinate an agreement with the chief of maintenance to perform these duties. This agreement will be in the form of an operations letter and shall establish responsibilities for the proper checking and marking of recorder reels; however, the ATC/facility chief will remain the custodian of the tapes.

454.4 In those instances where controller personnel assume responsibility for checking or changing recorder tapes, the ATC/facility chief shall arrange for maintenance personnel to brief all concerned controller personnel in the proper method to be used.

454.5 ATC/facility chief shall arrange with the chief of maintenance to establish procedures that assure the audio level to the recorders is checked following audio equipment change or maintenance. Notation of these checks shall be made on DA Form 3502-R.

455. Storage and retention.

455.1 Normal recorded information is retained for 15 days and then erased. When several tapes contain small amounts of information which is to be retained beyond the 15-day period, with the exception of aircraft accident or incident information, the information may be re-recorded on a single tape, marked accordingly, and retained. Original tapes may then be erased.

455.2 Tape shall be set aside for transcribing original information concerning aircraft accidents or incidents, operational hazards, and alleged violations. The transcription is authenticated by the designated custodian and retained for a minimum period of 6 months or until released in writing by the accident or incident investigation board. When equipment is not available for re-recording, original recordings are retained for 6 months.

456. Custodial control.

456.1 The ATC/facility chief has custodial responsibility for tape recordings made on Army-furnished or maintained recorder equipment.

456.2 Where the FAA has the responsibility for maintenance of recorder equipment, the FAA has custodial responsibility for the recorder tapes. In such cases, a letter of agreement will be initiated between the FAA and the facility.

460. Radio and Landline Communications Operation

461. Responsibility.

461.1 The shift supervisor on duty is responsible for all communications emanating from the facility. The ATC/facility chief shall ensure that continuous checks are made to detect and prevent superfluous or unauthorized transmissions.

461.2 Controllers shall not knowingly transmit or permit to be transmitted—

a. Obscene, indecent, or profane language.

b. Unauthorized, false, or deceptive communications.

c. Willful or malicious interference with other communications.

d. Identification not authorized or assigned.

e. Superfluous or unauthorized transmission including remarks of a personal nature.

462. Authorized messages not directly associated with ATC.

462.1 In addition to normal ATC transmissions, occasions may arise when messages, by a third party, pertaining to safety of aircraft operation or preservation of life or property are necessary. Such messages are authorized for handling on ATC radio communications channels; however, transmissions of this type shall be recorded on DA Form 3502-R. They may be handled by controller personnel or by certain persons concerned with the emergency. Noncontroller personnel may be given access to facilities to issue such messages for their respective interests provided—

a. Control instructions shall not be issued.

b. Such transmissions can be interrupted when required to continue ATC services.

462.2 Non-ATC instructions for organizational assigned aircraft are made only on assigned tactical frequencies. ATC facilities may relay non-ATC instructions only when no other sources of communications are available and such transmissions will not interfere with ATC instructions.

462.3 When it appears that such broadcasts may affect the control of air traffic, the ATC/facility chief shall be notified immediately.

463. Landline communications.

463.1 All telephone/landlines for fixed ATC facilities shall be terminated in a communications key system installed in the ATC facility. Direct landlines are authorized to adjacent ATC facilities and area ATC centers. Where key systems are recorded by position, commercial type telephones shall be provided on separate instruments.

463.2 Direct landlines are authorized between ATC facilities and command posts. Use of such landlines shall be restricted to the relay of essential command control instructions and advisories and handled secondary to the primary function of ATC services. They should not be used to relay information that is available from other sources (for example, departure and arrival times or load messages). If either a command post or an ATC facility requires immediate priority over the other, they shall on initial contact state, "STANDBY FOR EMERGENCY INSTRUCTIONS." All such instances shall be entered on DA Form 3502-R.

464. Radio operation.

464.1 During radar approaches, the controller shall not continuously key the radio transmitter except in an emergency or when he deems it necessary for flight safety. The decision on how often the transmitter is keyed to accomplish the approach is the controller's prerogative within the limitation prescribed for lost communications in FAA Handbook 7110.65.

464.2 To preclude or minimize possible interference with other facilities/stations, controllers shall not normally transmit simultaneously on two or more frequencies. Simultaneous transmissions may be made when traffic conditions so dictate or when, in the controller's judgment, such practice will enhance the safe and efficient movement of aircraft.

465. Emergency frequencies 121.5 MHz and 243.0 MHz.

465.1 ATC facilities shall have transmit and receive capability on emergency frequencies 121.5 MHz and 243.0 MHz. However, when ATC facilities are in proximity and no derogation of service will result, transmit/receive capability should not be provided for each facility but only as determined by requirements on an individual basis. The following requirements shall be maintained.

a. Geographical area coverage shall not be derogated.

b. Facilities without emergency frequency capability shall maintain a continuous monitor of these frequencies.

465.2 All facilities with emergency frequency capability shall maintain a continuous monitor of these frequencies.

465.3 Ultra high frequency (UHF) emergency frequency 243.0 MHz installed in military aircraft is provided with an override arrangement. As a result, transmissions on this frequency are received by all military aircraft within the transmitter's area of coverage. Unnecessary emissions on this frequency derogate communications on ATC frequencies and may interfere with bonafide emergency communications. Reduce transmissions on 243.0 MHz to the absolute minimum consistent with safety.

470. Interruptions to Navigational Aids, Communications, and Radar Equipment

471. Maintenance shutdown policy.

471.1 Maintenance personnel shall request approval for proposed maintenance shutdown of navigational aids, communications, or radar equipment.

471.2 ATC/facility chief, approach control or tower, or their designated representative, in that order, shall serve as approval authority for maintenance shutdown of equipment and for establishing any necessary priorities for restoring these units to operation. Approved shutdowns shall be coordinated with the airfield commander or a designated representative.

471.3 When a NAVAID is part of the National Airspace System (NAS), coordination is required with the appropriate ARTCC.

471.4 When the shutdown of a NAVAID will affect operation at other ATC facilities, the facility serving as approving authority shall coordinate with other facilities concerned.

471.5 ATC personnel shall cooperate fully with maintenance personnel in the performance of periodic maintenance to ensure that equipment operates reliably, particularly during IFR weather conditions. If conditions prevent approval of a shutdown at the time requested, indicate an alternative time.

471.6 To the maximum extent possible, approve planned maintenance shutdown of critical air traffic system components such as radar, communications, etc, during hours of least traffic activity, including hours of darkness.

471.7 Preventive maintenance on NAVAID and radar facilities is performed during VFR weather conditions; however, when continued IFR weather conditions or tactical operations make this impractical, consideration must be given to local operational requirements.

471.8 If maintenance is performed which could affect the reliability of a NAVAID or a NAVAID is not operating according to specified standards, the identification feature shall be removed or discontinued and a NOTAM shall be issued.

472. Monitoring NAVAID equipment.

472.1 The approach control facility is designated as the primary monitor facility. At locations

without approach control, the control tower is so designated.

472.2 Monitors not providing automatic visual and aural alarms shall be checked at least hourly and results entered on DA Form 3502-R.

472.3 When a facility normally delegated primary monitor responsibility does not operate on a continuous basis, this responsibility shall be assigned to another facility/agency if the NAVAID is to remain on the air continuously and provided—

a. Continuous manning is maintained.

b. The alternate facility/agency has a status indicator for each navigational aid to be monitored.

c. Maintenance personnel are prepared to respond expeditiously in the event of equipment malfunction.

d. Detailed procedures, including responsibility or submission of a NOTAM in the event of equipment malfunction, are contained in a letter of agreement or operations letter.

472.4 Facilities with inoperative monitors will be NOTAMed as "UNMONITORED;" those facilities without installed monitors will be so published in the flight information publication (FLIP) Enroute Supplement as unmonitored (that is, unmtd).

473. Reporting interruptions and malfunctions.

473.1 The ATC/facility chief is responsible for establishing procedures for reporting interruptions to NAVAID and malfunction of communications and radar equipment. This responsibility includes ensuring the timely responsiveness of maintenance personnel to a report of interruption or malfunction.

473.2 The shift supervisor on duty shall report any known or reported malfunction of equipment or interruption to a NAVAID to the appropriate maintenance personnel.

473.3 The ATC/facility chief will ensure that MIJI reports are submitted as required by AR 105-3.

474. NOTAM.

474.1 The airfield commander is responsible for the formulation and issuance of NOTAMs in accordance with the provisions of AR 95-9, FAA Handbook 7110.10, *Flight Services*, and/or other applicable directives.

474.2 The primary monitor in a facility/agency is normally designated as the focal point for all information relating to the performance of NAVAID and ATC facilities. At locations where the primary monitor does not provide continuous service, a designated alternate monitor shall perform this service. The airfield commander shall establish procedures to ensure that detailed information concerning interruptions and malfunctions is reported to the designated monitor who will ensure any required NOTAM is prepared and dispatched.

475. Use of backup power generators.

475.1 The ATC/facility chief shall coordinate with local engineers to ensure that auxiliary power sources for ATC facilities and NAVAID are maintained in optimum operational condition.

475.2 Maintenance personnel shall obtain approval from the ATC/facility chief or, in their absence, the shift supervisor on duty, before transferring power of ATC facilities or NAVAID during other than emergency situations.

480. Operation of Airfield Light Systems and Visual Aids

481. General airfield lighting.

481.1 Operation of airfield light systems and visual aids is the responsibility of the control tower. Airfield lighting shall be operated in accordance with FAA Handbook 7110.65. Deviations from this policy shall be fully outlined in a letter of agreement or operations letter and the facility operating procedures.

481.2 The operation of airfield lights during the hours the tower is closed shall be in accordance with letters of agreement or operations letters.

481.3 If a lighting system is not compatible with the instructions contained herein, or if the airfield commander prescribes operating periods contrary to those in this section (except for the airfield rotating beacon), the airfield lighting system may be operated provided a letter of agreement or operations letter is executed. Each letter shall set forth the operating periods, other pertinent provisions, and a statement that lights will be available upon pilot request.

481.4 During the period that a control tower is unattended and duplicate lighting controls are not installed in another facility/agency, the approach light system (ALS) shall be turned on and set to the lowest brightness level. A NOTAM shall be issued containing information that the system is unattended. Sequence flashing lights shall be turned off.

481.5 The airfield commander is responsible for the following:

a. Determining the status of all airfield lighting, making the final decision regarding its operation, and issuing any required NOTAM.

b. Ensuring that at least one daily check is completed on the performance of the ALS, visual approach slope indicator (VASI), and runway and taxiway lights. Any discrepancy noted during this check, or any report of malfunctioning, shall be reported to the local maintenance personnel/facility engineers and control tower as soon as possible, regardless of time of day or night.

c. Establishing local procedures on the operation of runway floodlights, where installed. Procedure shall ensure that they be turned off when an aircraft is required to taxi toward the lights where they may blind

the pilot, and they shall be operated as requested by a pilot.

482. Wind direction indicator.

482.1 Wind socks and tetrahedron equipment will be installed and operated as outlined in TM 5-823-4.

482.2 Normally only one wind transmitter (sensor) and indicator will be used at each AAF/AHP. However, because of terrain/distance and local operational requirements, certain AAF/AHP may require more than one wind transmitter and/or indicator.

482.3 Readout values derived from transmitters not located at the landing/takeoff area shall be used as an aid in determining "estimated wind" conditions (for example, AAF may have a single wind transmitter located on the roof of an elevated mobile control tower). The control tower operator should determine "estimated wind" after comparing readout values from the transmitter, wind sock indications, and visual observation of the landing/takeoff area.

482.4 Facilities not linked to the single transmitter will request wind direction and velocity from a connected facility.

482.5 Tower controllers shall notify the weather observer, approach control, and/or other appropriate facilities, whenever the direction of takeoff or landing is changed.

490. Bright Radar Indicator Tower Equipment (BRITE)

491. This system is designed for use in ATC towers. It is used as a radar aid to space, sequence, or separate aircraft. Identification of aircraft is accomplished by correlating radar targets to visually observed aircraft or by other established identification procedures. Use of the BRITE may be expanded to include radar separation and vectoring.

491.1 The functional use of radar (BRITE) in tower cabs should be limited to supplementing visual observations and as an aid in sequencing/spacing traffic. Controllers may provide radar traffic advisories as well as accept/provide radar handoffs from/to other facilities.

492.2 When the ATC tower has been delegated the expanded responsibility to radar separate and vector aircraft in the immediate vicinity of the airfield, the procedures shall be set forth in an operations letter or letter of agreement.

SECTION 500

ATC FACILITY TRAINING PROGRAM

510. Purpose

The Army ATC facility training program (FTP) provides for standardization and guidance in the conduct of facility training. The FTP is designed to prepare controllers for a facility rating and to maintain the proficiency of rated controllers who perform ATC duties in a facility.

520. Scope

This FTP is designed for use by all ATC facilities of the Army and is provided in three categories.

521. Qualification training. The facility training provided an individual preparatory to being facility rated. This training is mandatory for all newly assigned ATC personnel. Time limitations for this training are outlined in AR 95-37.

522. Proficiency training. An ongoing training program for controllers who are facility rated at that facility. Proficiency training is provided solely to refresh controllers in procedures or briefings of new procedures, etc. This type of training includes, but is not limited to—

522.1 Semiannual written test and controller evaluation. Semiannual written test will be an open-book examination comprised of no more than 100 nor less than 50 test items and shall include a controller evaluation (DA Form 3479-1R) on all positions applicable to the rating(s) held.

522.2 Annual weather certification.

522.3 Reviewing changes to local operational procedures.

522.4 Reviewing changes to controller handbooks, appropriate manuals, and regulations.

522.5 Reviewing FAA refresher briefing series.

522.6 SCATANA briefings as necessary.

523. Remedial training. Training given to controllers who have demonstrated a proficiency weakness while performing assigned duties. Remedial training will be given in the appropriate phase when the controller's level of proficiency indicates improvement is needed.

524. ATC facility administration/management training. Upon completing qualification training (that is, facility rated) facility administration/management training shall be given to all controllers in grade E5/GS-9 and above, if not previously completed, as preparation for duty assignment to ATC/facility chief, training NCO, or shift supervisor.

530. Responsibilities

531. ATC/facility chief.

531.1 The ATC/facility chief is responsible for establishing an ongoing FTP at his facility and establishing a facility training manual (FTM) in accordance with paragraph 570 of this manual. In addition, USACC agencies/detachments are responsible for conducting training in accordance with AR 350-1.

531.2 The ATC/facility chief may designate an ATC training supervisor (NCO/civilian) at each facility. The ATC training supervisor shall be facility rated and current. However, training supervisors assigned to a dual/multiple facility complex shall, as a minimum, obtain a facility rating in that facility for which they hold no previous rating (for example, a 93H30 with previous rating(s) in a control tower shall obtain a terminal radar facility rating and complete the controller position training phase for the other facility). If a training supervisor has been rated in both environments (that is, tower/radar), the type facility rating required will be at the discretion of the ATC chief.

531.3 Where a training supervisor is not authorized in accordance with DA Pam 570-567, the training supervisor responsibilities shall become an additional duty for the ATC facility chief or his duly appointed assistant.

532. ATC training supervisor. The ATC supervisor will—

532.1 Conduct and monitor all phases of the FTP, under the supervision of the ATC/facility chief.

532.2 Maintain training records (DA Form 3479-R) on each controller assigned or attached to the facility.

532.3 Coordinate with other agencies (for example, weather detachment, operations, or crash), prepare training classes based on locally required training subjects and update material, as required.

540. The Facility Training Program (FTP)

541. Indoctrination phase. The FTP for newly assigned controllers shall begin with the indoctrination phase. In addition to a briefing on the entire FTM and a comprehensive review of FTM chapter 1, it will include an airfield facilities tour and, where possible, a local orientation flight. This phase will culminate with a written examination on FTM chapter 1 and verification of a valid Class II physical.

542. Primary knowledge phase. This will consist of classroom training on the appropriate sections of chapters 2, 3, and 4 of the FTM and will culminate with a written examination and assignment to a shift. A current Class II physical is required to enter the next phase of training.

543. Controller position training phase.

543.1 The shift supervisor, in coordination with the training supervisor, will assign and monitor the controller trainee in each position in the facility and assist him with study assignments designated by the training supervisor in the Progress and Certification Record. When the controller trainee successfully completes that item, the training supervisor will initial and date the applicable item.

543.2 The training supervisor will administer a written/oral/practical test on each applicable part of the Progress and Certification Record as it is completed and shall enter the results in section VI, DA Form 3479-R.

543.3 In addition, the training supervisor shall designate applicable study assignments for the trainee from appropriate chapters, 5 through 12, of the FTM as they apply to the position training phase.

544. Position qualification phase. When an operational section of the Progress and Certification Record has been completed, the shift supervisor will notify the training supervisor that the trainee has sufficient working knowledge of that operating position and is prepared to take a special controller evaluation, DA Form 3479-1R, to be given by the training supervisor for position qualification. In addition to the special evaluation, the training supervisor may give a written or oral test for that operating position. When the training supervisor deems the trainee is position qualified, this will be entered in section V, DA Form 3479-R.

544.1 A trainee evaluation (DA Form 3479-1R) shall be given by the training NCO/shift supervisor not less than once every 2 weeks. Evaluations shall include those positions for which previously qualified in addition to that(those) position(s) for which training is being conducted.

545. Facility rating. The controller trainee will be scheduled for a facility rating (control tower operator (CTO) or air traffic control specialist (ATCS)) examination when—

545.1 The trainee has successfully completed a facility examination on each part of the Progress and Certification Record.

545.2 The trainee has been position qualified for each operating position applicable to the facility rating.

545.3 The trainee has successfully completed a prefacility rating examination administered by the training supervisor (oral or written).

546. Time limitations. Time limitations for qualification training will be tailored to individual progression rate and needs of the facility; however, maximum time allowed will not exceed those time limitations outlined in AR 95-37.

550. Facility Training Records and Forms

551. General.

551.1 The following training records and forms shall be used in the FTP to provide a record of training received and comprehensive progress report on each controller.

551.2 DA Forms 3479-R through 3479-6R shall be locally reproduced on 8" × 10½" paper (image size 6½" × 8½").

552. DA Form 3479-R (Air Traffic Control Training and Proficiency Record).

552.1 ATC/facility chief/training supervisors shall maintain a complete and current DA Form 3479-R for each assigned/attached military or civilian controller (app A) (fig 5-1). DA Form 3479-R shall be available for inspection at all times.

552.2 ATC students attending the US Army Air Traffic Control School, Ft Rucker, Alabama, shall receive their training record after successful completion of the ATC Course 93H/J.

552.3 The DA Form 3479-R will not be closed out until a controller is reassigned to another unit (fig 5-1). When a controller is reassigned, each section of the form (with the exception of Section I, Personal Identifying Data, and Section II, Air Traffic Controller Schools Attended) will be closed out by entering the date cleared by the ATC/facility chief, or other appropriate authority, as indicated by signature on the next open line of each section.

552.4 DA Form 3479-R consists of nine sections designed to serve as a comprehensive training report. These sections and their uses are—

a. Section I, Personal Identifying Data. Self-explanatory.

b. Section II, Air Traffic Control Schools Attended. Enter the name, location, and date of completion of ATC schools, supervisory courses, military occupational information (MOI), NCO, or any MOS Development courses attended.

c. Section III, Interview Data. Enter date of interview, reason for interview (for example, initial interview of newly assigned personnel, slow progress in training program, inability to maintain currency requirements, or departure interview), controller's initials to acknowledge interview, and the ATC/facility chief's/training NCO's/supervisor's initials.

d. Section IV, Assignments. Enter the name and location of the facility to which assigned, the actual duties performed (for example, controller, training supervisor, or shift supervisor), from—date assigned—to—date departed, and any certificates awarded incidental to ATC duties (include date awarded and

any remarks necessary).

e. Section V, Qualification, Proficiency, and Remedial Training Record. Enter the subject of instruction presented, the appropriate code letter (Q - Qualification, P - Proficiency, and R - Remedial), date training scheduled/administered, total hours of instruction given, and instructor's signature.

f. Section VI, Written/Oral/Practical Test Action. Enter the subject being tested, date test administered, score or rating achieved, and any pertinent remarks. All written tests will be retained with DA Form 3479-R until the trainee is facility rated. Thereafter, the semiannual and any proficiency tests given will be kept on file for 1 year from date test was administered.

g. Section VII, Proficiency Checks. Enter the operating position in which the check is conducted, date of check, score or rating achieved, number of hours expended on proficiency check, controller's initials to acknowledge proficiency check debriefing, instructor's initials, and any necessary remarks. DA Form 3479-1R, Trainee/Controller Evaluation will be used to record proficiency checks. All trainee controller evaluations will be kept on file with DA Form 3479-R until the controller is facility rated. Thereafter, controller evaluations for proficiency or remedial action will be kept on file for 1 year from date check was administered.

h. Section VIII, Individual Radar Record. Enter in this section the monthly count of radar approaches and operations conducted by the controller. Indicate type of approach and operation in appropriate column. When IFR approaches or operations are simulated, the count shall be prefixed with an "S" (for example S-5, etc). If a facility rated controller is counting a trainee controller's approaches, the count shall be prefixed with a "T" (for example, T-5). If no approaches or operations are conducted, enter zero in appropriate columns. This section of DA Form 3479-R shall be closed out the last day of each calendar year by entering the yearly total, the total to date (total of all previous year's approaches), and signatures of the controller and facility chief/training supervisor.

i. Section IX, Miscellaneous General Comments. Enter in this section any additional information from interview data or comments which may have a bearing on the individual's career (for example, Safe Aviation Via Exceptional Service (SAVES) or letters of commendation).

552.5 The DA Form 3479-R shall be attached to left foldout side of a manila folder.

553. DA Form 3479-R (Trainee/Controller Evaluation).

553.1 Preparation of DA Form 3479-1R is self-explanatory and shall be used to record trainee controller and controller proficiency checks/qualification/evaluations at all controller positions and shall be attached to the right foldout part of the manila folder on top of all written tests (app C).

553.2 The evaluator (that is, ATC/facility chief, training supervisor, or shift supervisor) shall sign at the bottom. Reviewing authority shall be the USACC agency/detachment commander, his authorized representative, or the ATC facility officer at those facilities so staffed.

554. DA Form 3479-2R (Progress and Certification Record for Control Tower).

554.1 DA Form 3479-2R shall be used as an FTP within towers as outlined in paragraph 540, and will be completed by the shift/training supervisor as the trainee controller progresses through the training program (app H).

554.2 DA Form 3479-2R shall be attached to the right side of the manila (training) folder or retained in a separate binder until the form is completed. When completed, the form shall be attached to the left side of the individual's training folder beneath DA Form 3479-R.

555. DA Form 3479-3R (Progress and Certification Record for Terminal Radar).

555.1 DA Form 3479-3R shall be used as an FTP within terminal radar facilities as outlined in paragraph 540 and will be completed by the shift/training supervisor and maintained as prescribed for DA Form 3479-2R (app I).

556. DA Form 3479-4R (Progress and Certification Record for Flight Operations Center (FOC) and Flight Coordination Center (FCC)).

556.1 DA Form 3479-4R shall be used as a facility training program within FOC/FCC as outlined in paragraph 540, completed by training/shift supervisor, and maintained as prescribed for DA Form 3479-2R. (app J).

557. DA Form 3479-5R (ATC Supervisor Evaluation).

557.1 DA Form 3479-5R is self-explanatory and shall be used to evaluate the proficiency of potential and assigned ATC supervisors. (app K).

557.2 Each ATC/facility chief/shift supervisor shall have at least one evaluation (DA Form 3479-5R) before assuming a functional supervisory position and shall have satisfactorily completed the ATC facility administration/management training phase.

557.3 Completed evaluations shall be attached to the right foldout part of the manila folder on top of all controller evaluations (DA Form 3479-1R).

557.4 The evaluator's grade/rank should be equal to, or greater than, the controller being evaluated.

558. Disposition of DA Forms 3479-1R through 3479-5R.

TRAINING AND PROFICIENCY RECORD - AIR TRAFFIC CONTROLLER

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

GENERAL INFORMATION

This form consists of Sections I through IX. It will be used as an authoritative source of information and reference in regard to the individual's training record as air traffic controller in the United States Army and as a comprehensive training progress report. Required entries within this form, will be recorded by the facility chief or the training supervisor.

SECTION I - PERSONAL IDENTIFYING DATA

NAME (Last name, first, middle initial)	ASGD INIT (Pencil)	RANK (Pencil)	CTO NUMBER	ATCS NO.	PMOS (Pencil)	DMOS (Pencil)
RULES, "I." "F."	IF	SP4	110-10-1010		93J20	93J20

DATE OF FLIGHT PHYSICAL (Pencil)	EXPIRATION TERM OF SERVICE (Pencil)	
4 Jan 76	15 May 80	

SECTION II - AIR TRAFFIC CONTROLLER SCHOOLS ATTENDED

NAME OF SCHOOL	LOCATION	DATE COMPLETED
ARMY ATC	FT. RUCKER, AL.	24 JUN 75

If additional space is needed for Section II, continue on plain paper. See Section III, page 2.

DA FORM 3479-R

PREVIOUS EDITIONS ARE OBSOLETE

Figure 5-1. Example of a Completed DA Form 3479-R.

SECTION III - INTERVIEW DATA				
			INITIALS	
DATE	REASON	ACTION	ATC	SUPV
1 JUL 75	ENTRY INTERVIEW	EXPLAIN SOP AND ASSIGN	IF	BS
		OPERATING INITIALS		

If additional space is needed for Section II, continue on plain paper. See Section IV, page 3.

DA FORM 3479-R 2

Figure 5-1—Continued.

SECTION IV - ASSIGNMENTS				
NAME AND LOCATION OF FACILITY TO WHICH ASSIGNED	DUTIES PERFORMED	DATE ASSIGNED (FROM)	DATE ASSIGNED (TO)	TYPE CERTIFICATES AWARDED, DATES END REMARKS
BIFF AFF (GCA)	TRAINEE	1 JUL 75	1 JAN 76	FACILITY RATED 1/1/76
	GCA CONTROLLER	2 JAN 76	8 AUG 76	
	GCA SHIFT SUPV	9 AUG 76		
	ATCS EXAMINER	9 AUG 77	30 JUL 78	USAATCA FORM 10 #35
	CLOSED OUT 30 JUL 78			I. M. CLEARER
If additional space is needed for Section IV continue on plain paper. See Section V, Page 4.				

DA FORM 3479-R

Figure 5-1—Continued.

SECTION V - QUALIFICATION, PROFICIENCY, AND REMEDIAL TRAINING RECORD					
SUBJECT	TYPE	DATE FROM	DATE TO	HOURS	INSTRUCTOR'S SIGNATURE
INDOCTRINATION	Q	7/2/75	1/15/75	80	
PRIMARY KNOWLEDGE	Q	7/16/75	8/15/75	40	
CONTROLLER POSITION TRAINING		8/16/75	12/1/75	420	
AD	Q		8/30/75	80	
ASR	Q	8/31/75	10/1/76	140	
PAR	Q	10/2/75	11/31/75	200	
PROCEDURAL CHANGE #4 FAAH 7110.65	P	12/10/75	12/10/75	2	
HANDOFF PROCEDURES	R	12/15/75	12/15/75	4	

If additional space is needed for Section V, continue on plain paper. See Section VI, page 5.

DA FORM 3479-R

Figure 5-1—Continued.

SECTION VI - WRITTEN/ORAL/PRACTICAL TEST ACTION			
SUBJECT	DATE	SCORE	REMARKS
INDOC	7/15/75	SAT	
PRIMARY KNOWLEDGE	8/15/75	SAT	
CONTROLLER POSITION TRAINING			
PART I 3479-3R	8/20/75	SAT	
PART II 3479-3R	8/25/75	SAT	
PART III 3479-3R	8/30/75	SAT	PQ AD 8/30/75
PART IV 3479-3R	9/20/75	SAT	PQ ASR 10/1/75
PART V 3479-3R	11/30/75	SAT	PQ PAR 11/31/75
PRE-FACILITY RATING EXAM	12/8/75	UNSAT	FAILED HAND-OFF PROCEDURES
HAND OFF PROCEDURES	12/15/75	SAT	
FACILITY RATING	1/3/76	SAT	ENTERED ON ATCS CERTIFICATE
If additional space is needed for Section VI, continue on plain paper. See Section VII, page 6.			

DA FORM 3479-R

5

Figure 5-1—Continued.

SECTION VII - PROFICIENCY CHECKS						
				INITIALS		
POSITION	DATE	SCORE	HOURS	ATC	SUPV	REMARKS
AD	8/25/75	S	2	IF	PS	
ASR	9/15/75	S	4	IF	BS	
PAR	10/15/75	S	2	IF	TT	
ASR/PAR	11/2/75	S	3	IF	BS	HAND OFF PROC WEAK
PAR	11/25/75	S	2	IF	TT	
AD/ASR/PAR	12/16/75	S	4	IF	PS	NOTED IMPROVEMENT IN HAND OFF PROC
AD/ASR/PAR	1/15/76	S	4	IF	BS	
If additional space is needed for Section VII, continue on plain paper. See Section VIII, page 7.						

DA FORM 3479-R

Figure 5-1—Continued.

SECTION VIII

INDIVIDUAL RADAR RECORD

YEAR 1975	PAR		ASR			MONITOR		TOTAL
	FINAL	EMERG NO-GYRO	PATTERN	FINAL	EMERG NO-GYRO	ARRIVAL	DEPAR-TURE	
JANUARY								
FEBRUARY								
MARCH								
APRIL								
MAY								
JUNE								
JULY								
AUGUST								
SEPTEMBER	0	0	20	10	S-5	S	3	43
OCTOBER	15 S-10	S-5	5	5	0	0	0	40
NOVEMBER	10 S-10	S-10	6	4	0	0	0	40
DECEMBER	5 S-15	S-23	34	S-5	S-3	4	6	49
TOTAL RUNS FOR YEAR	30 S-35	S-23	34	19 S-5	S-8	9	9	192
TOTAL RUNS BROUGHT FORWARD	0	0	0	0	0	0	0	0
TOTAL RUNS	30 S-35	S-23	34	19 S-5	S-8	9	9	344

FACILITY CHIEF SIGNATURE, DATE 3 Jan 76 | CONTROLLER SIGNATURE, DATE 4 Jan 76

See Section IX, page 8.

DA FORM 3479-R,

Figure 5-1—Continued.

SECTION IX - MISCELLANEOUS GENERAL COMMENTS	
1 1 MAR 77	SP4 RULES SELECTED AS AIR TRAFFIC CONTROLLER OF THE QUARTER. 284TH AVIATION COMPANY (ATC) HHD
2	
3	
4	
5	
6	
7	

DA FORM 3479-R

Figure 5-1—Continued.

558.1 On reassignment or expiration term of service (ETS), DA Forms 3479-1R through 3479-5R shall be removed from the training folder and returned to the individual.

560. Maintenance of Controller Training/Proficiency Record Files (DA Form 3479-R)

561. Systems managers.

561.1 Commander, USACC.

561.2 Commander, USAATCA.

561.3 ATC/facility chief with custody of record; or unit custodian (that is, manager/NCO in charge).

562. Preparation and maintenance DA Form 3479-R.

562.1 All Army ATC facilities at fixed AAF/AHP and in other Army aviation units having ATC personnel shall maintain DA Form 3479-R on assigned or attached ATC Specialists, military or civilian, in the following manner: A paper record in a file folder, filed alphabetically by the last name of the controller, shall be maintained in an area that is accessible only to authorized personnel that are properly screened, cleared, or trained.

562.2 It is suggested that a kraft file folder, NSN 7530-00-222-3443, heavy duty—straight cut, 9½" x 11¾" letter size, be used to retain ATC paper records. Front cover of subject file folder shall be annotated in the following manner:

AIR TRAFFIC CONTROLLER
INDIVIDUAL TRAINING
RECORDS FOLDER
UNITED STATES ARMY
If found, return to
nearest USACC Agcy/Det

562.3 These records will be used to record—

a. Training received.

b. Current physical fitness examinations (that is, Class II). (DA Form 4186, Medical Recommendation for Flying Duty)

c. Test/examination results.

d. Performance as it is used to determine proficiency to perform ATC duties.

e. Grades, ratings, and certifications obtained through training and DA Forms 3479-1R, 3479-2R, 3479-3R, 3479-4R, and 3479-5R.

f. Other correspondence related to training and/or ratings.

563. Access.

563.1 Individual—upon request.

563.2 Official—shall be made available to—

a. Supervisors (for example, training/shift supervisor).

b. FAA authorities.

c. Those military examiners who may facility rate the controller for duty.

d. Systems managers and their duly authorized representatives.

e. USACC activity/detachment commanders.

f. Investigators for aircraft accident and flight violations.

g. Requests from other individuals must be made in person (to the custodian of record) or by written request to the systems managers stating reason for request, intended use of information, name, military or civilian status, ATCS no., and duty location.

564. Contest.

564.1 Individuals who wish to contest the contents or appeal entries in DA Form 3479-R shall contact, through channels, Commander, US Army Air Traffic Control Activity (USAATCA), ATTN: CCQ-SYS-P, Ft Huachuca, AZ 85613, for information on such action.

565. Transport of records.

565.1 Upon transfer of an individual, DA Form 3479-R shall be closed out in accordance with 552.3 above. DA Form 3479-R must be sent to the records custodian of the Military Personnel Records Jacket, US Army (MPRJ) (DA Form 201) or civilian 201 file when it is forwarded between records custodians, as in the case of a permanent change of station (PCS) (AR 640-10).

565.2 Upon arrival of a new controller, DA Form 3479-R shall be retrieved from the records custodian and the ATC/facility chief/training supervisor shall reopen the training record by completing the next open line in Section III, Initial Interview, and Section IV, Assignments and Qualifications.

566. Retention.

556.1 These records are permanent in nature and shall remain in effect while a controller is on active duty.

556.2 Record(s) will be transferred with the MPRJ or civilian personnel folder as applicable upon termination of active service.

567. Privacy act statement.

567.1 ATC/facility chief shall have newly assigned personnel read DA Form 4368-R, Data Required by the Privacy Act of 1974 (app L) at the time of initial interview.

570. Preparation of the Facility Training Manual (FTM)

571. General.

571.1 The FTM is a locally prepared publication. The ATC/facility chief is responsible for the preparation of the FTM in accordance with AR 95-37. The FTM is to be used as a training manual for the purpose of preparing controllers for a facility rating, remedial training, proficiency training, and a reference source for rated air traffic controllers. The use of maps, charts, photos, or drawings is encouraged to make the material more understandable. The mini-

mum number of FTM copies at a facility is four; one each for the facility reference file, controller training file, daily operating file, and for conducting training. Additional copies may be maintained for individual controller study.

572. Outline and subject content for the FTM.

CHAPTER 1
FACILITY INDOCTRINATION

1-1. Mission.
1-2. The ATC facility.
a. Type.
b. Location.
c. Operating hours/reporting times.
d. Preduty requirements.
(1) Checking bulletin boards (give location of each).
(2) Reading file.
(3) Equipment checks.
(4) Briefings.
e. Completion of duty requirements.
(1) Briefings.
(2) Facility cleanup.
f. Training program and requirements.
(1) Description of training.
(2) Type (for example, classroom or laboratory).
(3) Written/oral/practical examinations.
(4) Training time limitations.
g. Reference materials.
(1) Location.
(2) Content.
(3) Use.
1-3. General description of associated facilities.
a. Type/location.
b. Eating facilities.
c. Transportation and parking.
d. Other.
1-4. Electronic warfare (EW) training.
a. EW threat briefing applicable to the facility.
b. Equipment and system vulnerabilities (both communications and noncommunications).
c. Realistic ECM training included in local exercises/training.
d. Recognition of ECM and appropriate ECCM.
e. Use of Allied Communications Procedures, as appropriate.
f. MIJI reporting.

CHAPTER 2
ATC FACILITY EQUIPMENT

2-1. Radio communications equipment.
a. Transmitters.
(1) Type.
(2) Location.
b. Receivers.
(1) Type.
(2) Location.
c. Microphones.
(1) Type.
(2) Location.
d. Frequencies—usage of each.
e. Maintenance and outages.
f. Standby communications equipment.
g. Secure voice operation.
2-2. Landline communications equipment.
a. Interphone system and drop.
(1) Type equipment.
(2) Location.
(3) Use.
(4) Circuit identification.
(5) Maintenance and outages.
b. Telephones.
c. Intercom units.
(1) Type.
(2) Location.
(3) Use.
(4) Maintenance and outages.
d. Weather disseminating device/electrowriter.
(1) Type.
(2) Location.
(3) Use.
(4) Maintenance.
e. Flight data electronic printer (FDEP).
(1) Type.
(2) Location.
(3) Use.
(4) Maintenance.
2-3. Recording equipment.
a. Type.
b. Location.
c. Positions/frequencies recorded.
d. Reel change procedures.
e. Marking and storage procedures.
f. Playback procedures.
g. Maintenance and outages.
2-4. Airfield lighting.
a. Tower cab.
b. Control panel.
c. Runway/helipad lights.
d. Threshold.
e. Boundary lights.
f. Approach lights.
g. Taxiway lights.
h. Rotating/flashing beacon.
i. Obstruction lights.
j. Wind direction indicator.
k. Runway directional lights.
l. Spotlight.
m. Ramp lights.
n. Other lighting.
o. Maintenance and outages.
2-5. Monitor equipment.
a. Equipment monitored.
(1) Terminal VOR (TVOR).
(2) ILS.

(3) Nondirectional beacon (NDB).
b. Location of monitors.
c. Maintenance and outages.
2-6. Automatic terminal information service (ATIS).
a. Use.
b. Operating procedures.
c. Message content and sequence.
d. Maintenance.
2-7. Miscellaneous equipment.
a. Portable light guns.
(1) Location.
(2) Operating procedures.
b. Traffic counters.
(1) Use.
(2) Location.
c. Binoculars.
d. Wind instruments.
(1) Use.
(2) Location.
e. Altimeter.
f. Clocks.
(1) Location.
(2) Time checks.
g. First aid kits.
h. Fire extinguishers.
i. Fuse boxes.
j. Heating and cooling equipment.
k. Emergency power equipment and controls.
l. Sky Genie egress system (where applicable).
m. BRITE (if applicable).
n. Maintenance of above equipment.

CHAPTER 3
POSITIONS OF OPERATION

3-1. Control tower cab.
a. Flight data.
(1) Location.
(2) Responsibility.
b. Ground control.
(1) Location.
(2) Responsibility.
c. Local control.
(1) Location.
(2) Responsibility.
d. Clearance delivery.
(1) Location.
(2) Responsibility.
e. Approach control.
(1) Location.
(2) Responsibility.
f. Others as appropriate to facility.
g. Combined positions.
3-2. Radar room (GCA).
a. Feeder.
(1) Location.
(2) Responsibility.
b. Flight data.
(1) Location.
(2) Responsibility.
c. Final controller.
(1) Location.
(2) Responsibility.
d. Others as appropriate to the facility.
3-3. ARAC.
a. Flight data.
(1) Location.
(2) Responsibility.
b. Arrival control.
(1) Location.
(2) Responsibility.
c. Departure control.
(1) Location.
(2) Responsibility.
d. Precision approach radar.
(1) Location.
(2) Responsibility.
e. Others as appropriate to the facility.
3-4. FOC/FCC.
a. Flight data.
(1) Location.
(2) Responsibility.
b. Flight following.
(1) Location.
(2) Responsibility.
c. Flight control.
(1) Location.
(2) Responsibility.
d. Others as appropriate to the facility.

CHAPTER 4
LOCAL AIRPORT INFORMATION

4-1. Airport.
a. Agency responsible.
b. Airport layout.
(1) Runways.
(*a*) Width.
(*b*) Length.
(2) Weight restrictions.
(3) Preferential runway.
(4) Other landing areas.
(5) Taxiways.
(*a*) Width.
(*b*) Identification.
(6) Ramp area.
(*a*) Hangar locations.
(*b*) Parking areas.
(*c*) Ramp areas.
(*d*) Servicing areas.
(*e*) Services available.
4-2. Tower visibility restrictions.
4-3. ILS critical area.
4-4. Radio blind spots.
4-5. Compass rose.
4-6. VOR receiver check points
a. Location.
b. Heading.

8-2. Departure procedures.
a. Routes.
(1) SID.
(2) Transitions.
b. Altitudes between fixes/intersections.
(1) Normal assigned altitudes.
(2) Minimum enroute altitudes.
8-3. Coordination procedures.
a. Interposition.
b. Local facility.
c. ARTCC.
d. Adjacent airports.
8-4. SCATANA procedures (if applicable).
a. Purpose.
b. Receipt of SCATANA notice.
c. Implementation procedures.
d. Records.

CHAPTER 9
SECONDARY RADAR

9-1. Component parts.
a. Interrogator—ground equipment.
b. Transponder—airborne equipment.
9-2. Presentations.
a. Factors.
(1) Line of sight.
(2) Aircraft altitude.
(3) Reflections.
(4) Resolution.
(5) Ring around.
(6) Slant range.
b. Interference.
9-3. Components function.
a. Interrogator.
b. Transponder.
c. Decoder.
d. Interlacing.
e. Emergency signal.
f. Code assignment.
9-4. Type of equipment (as associated with type radar system; for example, AN/TPX-41, ATCBI-3, etc).

CHAPTER 10
RADAR PROCEDURES

10-1. Procedures and minima.
a. Controlled airspace within radar range.
b. Below MEA.
c. Special VFR flights.
d. Vectoring.
e. Phraseology when issuing headings.
f. No-gyro procedures.
10-2. Utilization.
a. Position information.
b. Vectoring aircraft.
c. Traffic information.
d. Radar navigation.
e. Assistance when in distress.
f. Information on storm and precipitation areas.
g. Conducting precision or surveillance approaches.
h. Monitoring instrument approaches.

CHAPTER 11
EMERGENCY EQUIPMENT, NOTIFICATION PROCEDURES, INCIDENTS, AND ACCIDENTS

11-1. Emergency equipment.
a. Ambulance.
b. Firefighting equipment.
c. Rescue equipment.
(1) Helicopters.
(2) Other.
11-2. Notification procedures.
a. Ambulance.
b. Firefighting equipment.
c. Rescue equipment.
11-3. Action procedures.
a. Controllers.
b. Firefighting personnel and equipment.
c. Rescue personnel and equipment.
11-4. Incidents and aircraft accidents.
a. Types.
(1) Accidents.
(2) Emergencies.
(3) Irregularities.
b. Format and recording of incident report.
c. Information sources.
d. Primary reporting procedures.
11-5. Inflight emergencies.
a. Notification of emergency equipment.
b. Closing of airfield.
c. Foaming of runways.
d. Reports required.
11-6. Operational hazard report.
a. Preparation.
b. Submission.

CHAPTER 12
FACILITY ADMINISTRATION

12-1. Daily.
a. Compiling traffic count.
b. Recording traffic count.
c. Collection of facility forms and records.
d. Filing of facility forms and records.
12-2. Storing records.
a. Labeling.
b. Storage area.
c. Retention period.
12-3. Productivity records and schedules.
12-4. Dissemination of sensitive information.
a. Aircraft accident or incident.
b. Training/personal.

CHAPTER 13
ATC FACILITY ADMINISTRATION/ MANAGEMENT FOR SUPERVISORS

13-1. Administration.
a. Correspondence preparation.

b. Message preparation.
c. Staffing/TDA/Schedules X.
d. Enlisted efficiency reports.
e. Promotions and reclassification actions.
f. Emergency manning levels.
g. Civilian personnel policies.
h. Budgets and funding.
i. Duty schedules.
j. Leave policy and programs.
k. Publications requests.

13-2. Reports.
a. Equipment outages.
b. NOTAM.
c. Personnel reports.
d. AR 95-24, traffic reports.

13-3. Logistics.
a. Requisitions.
b. Forms contained in TM 38-750.
c. Prescribed load list (PLL)/authorized stockage list (ASL) familiarization.
d. Operator maintenance.
e. Engineer work orders.
f. Calibration.

13-4. Accidents or incidents.
13-5. OHR.
13-6. Flight inspection procedures.
13-7. Preparation of telecommunication requirement (TELER) and Military Construction Army (MCA) documentation.
13-8. Training records and training programs.
13-9. Leadership (counseling). (FM 22-100.)
13-10. Facility rating and certification programs and procedures.
13-11. Coordination with FAA, DARR.
13-12. AR 95-9 and 95-50 and TB 95-1.
13-13. Operations letters, letters of agreement, and facility memoranda.
13-14. Installation staff coordination procedures.
13-15. Military bearing and uniform regulation, Service Member (SM).
13-16. Staff meetings.
13-17. Command structure.

SECTION 600

US ARMY RESERVE AND NATIONAL GUARD ATC TRAINING PROGRAM

610. Purpose

This training guide provides for standardization and guidance in the conduct of training in terminal ATC facilities for all Army National Guard and US Army Reserve components.

620. Training Objectives

The objective of training outlined herein is to train/cross-train individual air traffic controllers in the knowledge and skills needed to perform duties as required by their duty assignments. This guide is to be used for National Guard and Army Reserve weekend training in preparation for annual active duty training.

630. General Training Notes.

This is a training guide for the instructor in preparing lesson plans and should be supplemented with the facility training manual. Training problems peculiar to a given facility may require modification of portions of the training herein.

631. Training programs. Training programs are listed as follows:

631.1 The control tower program covers blocks A and B of the master schedule (fig 6-1).

631.2 The radar program covers blocks A and C of the master schedule (fig 6-1).

631.3 The tactical equipment program covers block D of the master schedule (fig 6-1).

632. Training management. Training management will be guided by FM 21-5.

633. Instructors. The instructor(s) must be familiar with training principles and techniques as discussed in FM 21-6.

634. Preparation of FTM. Portions of this training require a locally prepared FTM as a text. Preparation instructions and an outline for the FTM are contained in section 500.

635. Master schedule. The master schedule is the recommended sequence of training. It is recognized that the on-duty instructor may not be able to follow the schedule exactly. The training should then be rescheduled to meet the operation needs of the unit.

636. GCA operations warning.

Warning: Before operating a GCA unit or any electronic signalling device, coordination must be effected with the appropriate FAA and military authority to ensure that interference with their (FAA/military) equipment will not occur.

640. Lesson Outlines (Terminal Air Traffic Control Facilities)

641. Block A, Local Facility Information (14 Hr).

641.1 First Period (50 min).

a. Lesson objective. To provide an understanding of the general information pertaining to the organization and the ATC facility.

b. Lesson outline.

(1) Unit mission.
(2) Organizational chart.
(3) Military chain of command.
(4) How the trainee controller will serve the facility in respect to his responsibilities, duties, and position.
(5) Facility training program.
(6) Preduty requirements.
(*a*) Check bulletin boards, binders, facility memoranda, and attending weather.
(*b*) Operational briefing.
(*c*) "Signing on/off" on the tower/position log.
(7) Miscellaneous noncontrol duties.

641.2 Second Period (100 min).

a. Lesson objective. To acquaint the trainee with local airport information.

b. Lesson outline.

(1) The agency responsible for airport operation.
(2) The airport layout using a map and the FTM.
(3) Scheduled air carriers using the airport.
(4) Nonscheduled air carriers using the airport.
(5) Military operations at the airport.
(6) Miscellaneous operations at the airport.

641.3 Third Period: Written Test and Critique Covering First and Second Periods of Instruction (50 min).

641.4 Fourth Period (100 min).

a. Lesson objective. To familiarize the trainee with facility operating positions and functions.

b. Lesson outline.

(1) Control tower cab.
(*a*) Flight data.
(*b*) Ground control.
(*c*) Local control.
(*d*) Clearance delivery.
(*e*) Approach control.
(*f*) Others as appropriate.

MASTER SCHEDULE
(Terminal Air Traffic Control Facilities)

Block A, Local Facility Information (14 Hr).

Period	Hours	Lesson	Text Reference	Area	Training aids
1	1	Facility indoctrination.	Chapter 1, FTM; unit operating procedures; organizational chart.	Classroom	Blackboard, organizational chart; FTM.
2	2	Local airport information.	Chapter 4, FTM.	Classroom	Blackboard; FTM.
3	1	Written test and critique, periods 1 and 2.	Chapters 1 and 4, FTM.	Classroom	None.
4	2	Positions of operation.	Chapter 3, FTM.	Classroom	FTM, ATC facility equipment.
5	2	ATC facility equipment.	Chapter 2, FTM.	Classroom	FTM, ATC facility equipment.
6	1	Written test and critique, periods 4 and 5.	Chapters 2 and 3, FTM.	Classroom	None.
7	4	Letters, handbooks, publications, and local flying area.	Letters of agreement; Chapters 5 and 6, FTM.	Classroom	Local area map; DOD Flip; blackboard.
8	1	Written test and critique, period 7.	Chapters 5 and 6, FTM.	Classroom	None.

Block B, Control Tower (43 Hr).

Period	Hours	Lesson	Text reference	Area	Training aids
9	1	Interphone systems and drops.	Chapter 2, FTM.	Classroom	Interphone equipment.
10	3	Radio and interphone communications.	FAA Handbook 7110.65.	Classroom	Reference text; tape recorder.
11	1	Written test and critique, periods 9 and 10.	Chapter 2, FTM; FAA Handbook 7110.65.	Classroom	None.
12	1	Flight plans.	Chapter 7, FTM; FAA Handbook 7110.65.	Classroom	Blackboard.
13	2	Flight progress strips.	Chapter 7, FTM; FAA Handbook 7110.65.	Classroom	Blackboard; FAA strips.
14	1	Written test, period 12; written test, period 13; and critique.	Chapter 7, FTM; FAA Handbook 7110.65.	Classroom	FAA strips.
15	2	Weather.	FAA Handbook 7110.65.	Classroom	Blackboard; reference text.
16	1	Written test and critique, period 15.	FAA Handbook 7110.65.	Classroom	None.
17	1	NOTAM.	Unit operating procedures. Chapter 2, FTM.	Classroom	Blackboard.
18	1	Standby communications equipment.	Chapter 2, FTM.	Classroom	Reference texts; facility equipment.
19	1	Written test and critique, periods 17 and 18.	Chapter 2, FTM.	Classroom	None.
20	2	Emergency and special notification procedures.	Chapter 11, FTM; unit operating procedures.	Classroom	Reference texts.
21	1	Written test and critique, period 20.	Chapter 11, FTM; unit operating procedures.	Classroom	None.
22	1	SCATANA.	Chapter 8, FTM; AR 95-21.	Classroom	Reference texts.
23	1	Written test and critique, period 22.	Chapter 8, FTM; AR 95-21.	Classroom	None.
24	1	Recording equipment.	Chapter 2, FTM.	Classroom	Facililty recorder equipment.
25	1	Processing daily records.	Chapter 6, FTM.	Classroom	Forms used at facility.
26	1	Weather observation certification.	Chapter 4, FTM.	Classroom	Blackboard; visibility checkpoint charts.

Figure 6-1. Master Schedule.

Period	Hours	Lesson	Text reference	Area	Training aids
27	7	Federal aviation regulation/ATC.	FAR, Part 91; FAA Handbook 7110.65.	Classroom	Blackboard; reference texts.
28	1	Written test and critique, periods 24 thru 27.	FAR, Part 91; FAA Handbook 7110.65.	Classroom	None.
29	1	Visual signals.	FAA Handbook 7110.65; chapter 2, FTM.	Classroom	Blackboard; light gun.
30	1	Written test and critique, period 29.	FAA Handbook 7110.65; chapter 2, FTM.	Classroom	None.
31	2	General control procedures.	FAA Handbook 7110.65.	Classroom	Blackboard; reference text; tape recorder.
32	1	Airport traffic flow.	Unit operating procedures; FAA Handbook 7110.65; letters of agreement; chapter 4, FTM.	Classroom	Blackboard; reference texts.
33	2	IFR procedures.	FAA Handbook 7110.65; letters of agreement; chapter 8, FTM.	Classroom	Reference texts.
34	1	Coordination procedures.	Chapter 8, FTM.	Classroom	Reference text.
35	1	Written test and critique, periods 31 thru 34.	FAA Handbook 7110.65; letters of agreement; chapters 4 and 8, FTM.	Classroom	None.
36	1	Incidents and aircraft accidents.	Unit operating procedures; chapter 11, FTM.	Classroom	Reference texts.
37	1	Special flight operations and special military procedures.	FAA Handbook 7110.65; unit operating procedures.	Classroom	Blackboard; reference texts.
38	1	Written test and critique, periods 36 thru 37.	FAA Handbook 7110.65; chapter 11, FTM; unit operating procedures.	Classroom	None.

Block C, Radar (33 Hr.)

Period	Hours	Lesson	Text reference	Area	Training aids
39	3	Fundamentals of radar, radar phenomena.	TM 11-series-12 operator's manual; chapter 9, FTM.	Classroom	Blackboard; reference texts.
40	4	Radar set characteristics.	..... do	Classroom	Reference texts; local set; blackboard.
41	1	Written test and critique, periods 39 and 40.	..... do	Classroom	None.
42	4	Radar set controls.	..... do	Classroom	Reference text; local set; blackboard.
43	2	Radar alinement procedures.	..... do	Classroom	Reference text; local set; blackboard.
44	1	Written test and critique, periods 42 and 43.	..... do	Classroom	None.
45	2	Secondary radar (IFF).	..... do	Classroom	Reference text; IFF equipment; blackboard.
46	4	Radar use, procedures and minima.	Chapter 10, FTM; FAA Handbook 7110.65; TM 11-series-12 operator's manual.	Classroom	Blackboard; reference texts.
47	3	Radar identification and handoff.	..... do	Classroom	Blackboard; reference texts.
48	3	Radar separation and departures.	..... do	Classroom	Blackboard; reference texts.
49	4	Radar arrival procedures.	..... do	Classroom	Blackboard; reference texts.

Figure 6-1—Continued.

Period	Hours	Lesson	Text reference	Area	Training aids
50	1	Radar additional services.	..... do	Classroom	Blackboard; reference texts.
51	1	Written test and critique, periods 45 thru 50.	..... do	Classroom	None.
Block D, Tactical Equipment.					
52		Tactical equipment set-up.	TM 11-series-12 operator's manual.	Classroom	Blackboard; reference texts; equipment.
53		Written test and critique, period 52.	..... do	Classroom	None.

Figure 6-1—Continued.

(2) ARAC or GCA room.
(a) Radar approach control.
(b) Radar departure control.
(c) Flight data.
(d) Precision approach radar.
(e) VFR radar advisory.
(f) Others as appropriate.

641.5 Fifth Period (100 min).

a. Lesson objective. To acquaint the trainee with the equipment used in the ATC facility and associated facilities.

b. Lesson outline.

(1) Radio communications equipment to include—
(a) Transmitters—types, location, and control panels.
(b) Receivers—types, location, and control panels.
(c) Microphones—types and use.
(d) Frequencies—use of each.
(e) Voice security equipment.

(2) Landline communications equipment to include—
(a) Intercom units.
(b) Telephones.
(c) Weather disseminating device.
(d) Teletypes.
(e) Others as appropriate.

(3) Tape recorder equipment, type and location.

(4) Control console equipment to include altimeter, wind direction and velocity, and clocks.

(5) Airfield lighting equipment.
(a) Approach lights.
(b) Runway and helipad lights.
(c) Taxiway lights.
(d) Rotating beacon.
(e) Obstruction lights.
(f) Wind direction indicator.
(g) Tower cab lights.
(h) Others as appropriate.

(6) Miscellaneous airfield equipment.
(a) Light signal guns.
(b) Landing direction indicator.
(c) Traffic counters.
(d) Binoculars.
(e) RVR/runway visibility value (RVV) indicators.
(f) Heating and cooling systems.
(g) Airfield public address system.

(7) Flight progress board location and use.

(8) NAVAID monitoring equipment.
(a) VOR monitor and control panel.
(b) ILS monitor and control panel.
(c) NDB monitor and control panel.

(9) Emergency equipment.
(a) Emergency power equipment.
(b) Fire extinguishers.
(c) First aid kits.
(d) Electrical fuse and distribution boxes.

(10) The procedures for recording equipment outages, standard forms, entries used, and personnel to be notified.

641.6 Sixth Period: Written Test and Critique Covering Fourth and Fifth Periods of Instruction (50 min).

641.7 Seventh Period (200 min).

a. Lesson objective. To identify the location and explain the general content of facility letters, handbooks, and publications, and to familiarize the trainee with the local flying area.

b. Lesson outline.

(1) Location and general content of the following:
(a) FAA Handbook 7110.65.
(b) AR 95-37.
(c) FM 1-200.

(2) Location and general content of local facility letters, operations letters, and memoranda.

(3) Location and general content of the letters of agreement.

(4) Location and general content of the facility reading files and binders.

(5) Location and use of facility forms and supplies.

(6) Local flying area.
(a) Airways.
(b) Location identifiers.
(c) NAVAID.
(d) Boundaries, geographical, and altitude.
(e) Minimum altitudes.
(f) Approach aids.
(g) Airports.
(h) Restricted, warning, or prohibited areas.

(7) Departure and arrival routes.
(a) Preferential routes.
(b) Coded departures.
(c) Clearance limits.
(d) Release fixes.
(e) Holding patterns.
(f) Standard instrument departures.
(g) Others as applicable.

(8) Terminal area.
(a) Control zone dimensions and corridors.
(b) Terminal NAVAID.
(c) Terrain features.
(d) Reporting points.
(e) Others as appropriate.

(9) Terminal area procedures.
(a) Preferential runway.
(b) Noise abatement procedures.
(c) Airport taxi rules and regulations.
(d) Special air operation procedures, including medical evacuation and rescue.

(10) Review lesson material.

641.8 Eighth Period: Written Test and Critique Covering Seventh Period of Instruction (50 min).

642. Block B, Control Tower (43 Hr).

642.1 Ninth Period (50 min).

a. Lesson objective. To familiarize the trainee with the location, identification, and proper use of interphone equipment.

b. Lesson outline.

(1) Interphone equipment and drops.
- (a) Equipment type.
- (b) Location.
- (c) Operation.
- (d) Monitored and recorded circuits.

(2) Circuit identification and users of each line.

(3) Interphone failure procedures.
- (a) Alternate methods of relay.
- (b) Notification procedures and failure reports.

(4) Review lesson material.

642.2 Tenth Period (150 min).

a. Lesson objective. To identify the correct procedures and phraseology in the use of radio and interphone communications.

b. Lesson outline.

(1) Importance of having a standard procedure for radio/interphone usage.

(2) Importance of voice intelligibility.

(3) Interphone procedures.
- (a) Routing of calls.
- (b) Call-up technique.
- (c) Answering technique.
- (d) Procedures for relaying data.
- (e) Acknowledgement and sign-off technique.
- (f) Additional local procedures.

(4) Interphone transmission priorities.
- (a) Interruption procedures.
- (b) Interruption phraseology.

(5) Radio message format and phraseology.
- (a) Initial call-up.
- (b) Replying to call-up from aircraft.
- (c) Abbreviated transmissions.
- (d) Words and phrases.
- (e) Emphasis for clarity.
- (f) ICAO phonetics.
- (g) Numbers usage.
- (h) Facility identification.
- (i) Aircraft identification.
- (j) Airways and routes.
- (k) NAVAID terms.
- (l) NAVAID fixes.

642.3 Eleventh Period: Written Test and Critique Covering Ninth and Tenth Periods of Instruction (50 min).

642.4 Twelfth Period (50 min).

a. Lesson objective. To acquaint the student with flight plan format, sources, and procedures.

b. Lesson outline.

(1) Item listed in flight plan format.

(2) Purposes of and items listed in an abbreviated flight plan.

(3) Sources of flight plans.

(4) Action taken upon receipt.
- (a) IFR flight plan.
- (b) VFR and Defense VFR (DVFR) flight plan.

(5) Flight plan procedures.
- (a) Forwarding information.
- (b) IFR to VFR flight plan change.
- (c) IFR flight.
- (d) Airborne military flights.
- (e) VFR penetration of positive control area.
- (f) Forwarding flight data.

642.5 Thirteenth Period (100 min).

a. Lesson objective. To acquaint the student with the format and usage of flight progress strips and control symbology, and to provide classroom practice in strip marking.

b. Lesson outline.

(1) Flight progress strip format and use of each box.

(2) Local supplementary procedures.

(3) Methods of revising strips.

(4) Standard symbols used in strip marking.

(5) Demonstrate strip marking using blackboard and strips.

642.6 Fourteenth Period: Written Test Covering Twelfth Period; Performance Test Covering Thirteenth Period and Critique (50 min).

642.7 Fifteenth Period (100 min).

a. Lesson objective. To provide the student with an understanding of weather information.

b. Lesson outline.

(1) Elements, format, and interpretation of a weather report.

(2) Winds aloft, radar reports, and pilot reports.

(3) Weather change reporting procedures.

(4) Location and operation of the teleautograph and local weather posting procedures.

(5) Weather procedures.
- (a) Familiarization.
- (b) Weather assistance.
- (c) PIREPS.
- (d) PIREPS solicitation.
- (e) Clear-air turbulence (CAT) reports.
- (f) Significant meteorological information (SIGMET) alerts.

(6) Review the lesson material.

642.8 Sixteenth Period: Written Test and Critique Covering the Fifteenth Period of Instruction (50 min).

642.9 Seventeenth Period (50 min).

a. Lesson objective. To acquaint the student with basic NOTAM information and local processing procedures.

b. Lesson outline.

(1) Purpose of NOTAM.
(2) NOTAM codes.
(3) Types of NOTAM.
(a) NAVAID.
(b) Hazards.
(c) Lighting.
(d) Airports.
(e) General items.
(4) Review lesson material.

642.10 Eighteenth Period (50 min).

a. Lesson objective. To familiarize the student with the location, types, and operation of standby communications equipment.

b. Lesson outline.

(1) Location.
(2) Type.
(3) Operation.
(a) Control panels.
(b) Turn-on and shutdown procedures.
(c) Tuning and channel selection.
(4) Maintenance notification procedures.

642.11 Nineteenth Period: Written Test and Critique Covering Seventeenth and Eighteenth Period of Instruction (50 min).

642.12 Twentieth Period (100 min).

a. Lesson objective. To provide the student with an understanding of emergency and special notification procedures.

b. Lesson outline.

(1) Airport emergency procedures.
(a) Location of alarm.
(b) Operation of alarm.
(c) Coded categories of alerts.
(d) Handbooks and facility memoranda.
(e) Offices and parties to be notified.
(2) General emergency procedures.
(a) Emergency determinations.
(b) Obtaining information.
(c) Providing assistance.
(d) Responsibility.
(e) Coordination.
(f) Forwarding information.
(g) Requesting assistance.
(3) Emergency assistance procedures.
(a) Information requirements.
(b) Frequency change.
(c) Aircraft orientation.
(d) Altitude change for improved reception.
(e) Overdue aircraft.
(f) Alerting search and rescue.
(g) Aircraft position plots.
(h) VFR aircraft in weather difficulty.
(i) Radar assistance and techniques.
(4) Control actions.
(a) Traffic restrictions.
(b) Lighting requirements.
(c) Traffic resumption.
(d) Communications failure.
(e) Airport ground emergencies.
(5) Miscellaneous emergency operations.
(a) Explosive cargo.
(b) Navy fleet support missions.
(c) Dutch and Aspen aircraft.
(d) Soviet Bloc aircraft emergency landings.

642.13 Twenty-First Period: Written Test and Critique Covering the Twentieth Period of Instruction (50 min).

642.14 Twenty-Second Period (50 min).

a. Lesson objective. To acquaint the student with SCATANA procedures.

b. Lesson outline.

(1) Purpose of SCATANA.
(2) SCATANA procedures.
(a) Clearing area.
(b) Shutdown of NAVAID.
(c) Notification of clear area.
(d) Resuming activity.
(e) Procedures for completing records.

642.15 Twenty-Third Period: Written Test and Critique Covering the Twenty-Second Period of Instruction (50 min).

642.16 Twenty-Fourth Period (50 min).

a. Lesson objective. To acquaint the student with the type, location, and operation of recording equipment.

b. Lesson outline.

(1) Positions or frequencies recorded.
(2) Type and location of equipment.
(3) Operation.
(a) Recording time.
(b) Playback.
(c) Reel change procedure.
(d) Monitor panel.
(e) Erasure.
(f) Transcribing.

642.17 Twenty-Fifth Period (50 min).

a. Lesson objective. To familiarize the student with local procedures for processing daily records.

b. Lesson outline.

(1) Collection procedures.
(2) Traffic count tabulation.
(3) Storage.

642.18 Twenty-Sixth Period (50 min).

a. Lesson objective. To provide an understanding of the knowledge required to obtain a weather observation certification.

b. Lesson outline.

(1) Definition of visibility.
(2) Units of visibility measurement.
(a) Local observation points.
(a) Range.
(b) Bearing.
(4) Procedures for reporting visibility.

(a) Charts.
(b) Visibility in a definite direction.
(c) Prevailing visibility.
(d) Entries on appropriate forms.

642.19 Twenty-Seventh Period (350 min).

a. *Lesson objective.* To familiarize the student with the general content of FAR, Part 91, and the procedures in FAA Handbook 7110.65.

b. *Lesson outline.*

(1) FAR, Part 91.
(a) General flight rules.
(b) Visual flight rules.
(2) Airport traffic control.
(a) Terms of reference.
(b) Responsibilities.
(c) Definitions.
(d) Abbreviations.
(3) General control procedures and phraseology.
(4) Traffic information and phraseology.
(5) Field conditions and phraseology.
(6) Runway use procedures.
(7) Taxi and departure procedures and phraseology.
(8) Arrival procedures and phraseology.
(9) Departure separation procedures.
(10) Arrival separation procedures.
(11) Special VFR (SVFR) procedures and separation.
(12) Review lesson material.

642.20 Twenty-Eighth Period: Written Test and Critique Covering Twenty-Fourth Through Twenty-Seventh Periods (50 min).

642.21 Twenty-Ninth Period (50 min).

a. *Lesson objective.* To acquaint the student with the use of airport visual signals.

b. *Lesson outline.*

(1) Portable traffic light gun.
(a) Equipment operation.
(b) Meanings of signals.
(c) Pilot acknowledgement.
(d) Suitable aircraft positions.
(2) Airport rotating beacon.
(3) Tetrahedron or wind tee.
(4) Flashing amber light and traffic pattern markers.
(5) Review lesson material.

642.22 Thirtieth Period: Written Test and Critique Covering Twenty-Ninth Period of Instruction (50 min).

642.23 Thirty-First Period (100 min).

a. *Lesson objective.* To provide the student with an understanding of general control procedures.

b. *Lesson outline.*

(1) NAVAID use limitation.
(2) IFR clearance procedures and phraseology.
(3) Traffic information procedures and phraseology.
(4) Altimeter settings procedures and phraseology.
(5) Altitude verification and position reporting procedures and phraseology.
(6) Review lesson material.

642.24 Thirty-Second Period (50 min).

a. *Lesson objective.* To acquaint the student with airport traffic flow.

b. *Lesson outline.*

(1) Airport traffic patterns.
(a) Altitudes and distance from airport.
(b) Overlapping patterns with adjacent airports.
(2) Airport rules and regulations.
(a) Landing and takeoff.
(b) Entering traffic pattern.
(c) Parking.
(3) Traffic sequencing.
(a) Runway acceptance rate.
(b) Aircraft operating characteristics.

642.25 Thirty-Third Period (100 min).

a. *Lesson objective.* To familiarize the student with the IFR procedures for the local airport.

b. *Lesson outline.*

(1) Approach procedures.
(a) Initial approach altitude.
(b) Holding patterns.
(c) Procedure turn.
(d) Final approach altitude.
(e) Final approach course/heading.
(f) Release point.
(g) Missed approach procedures.
(h) Weather minimums.
(i) Timed approaches.
(2) Departure procedures.
(a) Routes, headings, courses, radials, and tracks.
(b) SIDS.
(c) Coded.
(d) Others as appropriate.
(e) Altitudes.

642.26 Thirty-Fourth Period (50 min).

a. *Lesson objective.* To acquaint the student with coordination procedures used at the airport.

b. *Lesson outline.*

(1) Interposition.
(2) Local facility.
(3) Adjacent facilities.
(4) Others as appropriate.

642.27 Thirty-Fifth Period: Written Test and Critique Covering the Thirty-First Through Thirty-Fourth Periods (50 min).

642.28 Thirty-Sixth Period (50 min).

a. *Lesson objective.* To acquaint the student with the procedures required for incidents or accidents.

b. *Lesson outline.*

(1) Incident reporting procedures.
(a) Types of incidents.

(b) Format and recording of the report.
(c) Information sources.
(d) Compiling report.
(e) Dissemination.
(2) Accident reporting procedures.
(a) Classification of accidents.
(b) Information required.
(c) Information sources.
(d) Accident packages.
(e) Dissemination.
(3) Local instructions and publications relative to accidents or incidents.
(4) Review lesson material.

642.29 Thirty-Seventh Period (50 min).

a. Lesson objective. To acquaint the student with special flight operations/special military procedures.

b. Lesson outline.
(1) NAVAID flight check procedures.
(2) Presidential and Vice Presidential aircraft procedures.
(3) Fuel dumping procedures.
(4) Ground missile emergency procedures.
(5) Parachute jumping procedures.
(6) Special operations.
(a) Atomic Energy Commission special flights.
(b) FLYNET.
(c) LEFT HAND.
(7) Special Military procedures.
(8) Review lesson material.

642.30 Thirty-Eighth Period: Written Test and Critique Covering the Thirty-Sixth and Thirty-Seventh Periods of Instruction (50 min).

643. Block C, Radar (33 Hr).

643.1 Thirty-Ninth Period (150 min).

a. Lesson objective. To acquaint the student with the fundamentals of radar and radar phenomena.

b. Lesson outline.
(1) Evolution of radar.
(a) Origin.
(b) Development.
(c) Advanced equipment and future development.
(d) Derivation and meaning of radar.
(e) Echo principles.
(f) Radar antennas.
(2) Basic pulse radar system.
(a) Synchronizer.
(b) Modulator.
(c) Transmitter.
(d) Duplexer.
(e) Antenna.
(f) Reflector.
(g) Receiver.
(h) Indicator.
(i) Position data system.
(j) Sweep generator.
(3) Radar Phenomena.
(a) Target fading.
(b) Meteorological effects on radar.
(c) Radar jamming.
(d) Electronic radar interference.
(4) Radar hazards.
(a) Fire.
(b) Radioactivity.
(c) Implosion of the cathode ray tube (CRT).
(d) Radiation.
(5) Review lesson material.

643.2 Fortieth Period (200 min).

a. Lesson objective. To acquaint the student with the local radar set characteristics.

b. Lesson outline.
(1) Antenna coverage pattern.
(2) Range and azimuth accuracy.
(3) Range and azimuth resolution.
(4) Maximum range.
(5) Radar equipment characteristics.
(a) Antenna beam widths.
(b) Antenna rotation speed or scan rate.
(c) Transmitter frequency.
(d) Transmitter pulse widths.
(e) Pulse repetition frequency.
(f) Receiver sensitivity in decibels.
(g) Input power requirements.
(h) Ambient operating temperature range.
(i) Maximum wind.
(j) Sweep ranges and range mark spacing on all functions.
(k) Scan sectors on all functions.
(l) Antenna tilt and servo limits.
(6) Review lesson material.

643.3 Forty-First Period: Written Test and Critique Covering the Thirty-Ninth and Fortieth Periods of Instruction (50 min).

643.4 Forty-Second Period (200 min).

a. Lesson objective. To acquaint the student with the location and use of radar set controls.

b. Lesson outline.
(1) Radar set turn-on procedures.
(2) Radar set turn-off procedures.
(3) Indicator control functions and location.
(a) Intensity.
(b) focus.
(c) Centering controls.
(d) Offcentering controls.
(e) Range selector switch.
(f) Range mark intensity.
(g) Video and IFF gains.
(h) Transmitter pulse width selector.
(i) IFF/SIF controls.
(j) Navhead and compass rose lights.
(k) Tilt meter and mount position indicator/plan position indicator (PPI) orient control.
(l) Antenna servo control.
(m) Function selector switch.

(n) IF gain control.
(o) Sensitivity time control (STC).
(p) Fast time constant (FTC).
(q) Antenna polarization.
(r) Indicator warning lights.
(s) Control transfer.
(t) Main power on-off.
(u) High voltage on-off.
(v) Scan on-off.
(w) Video map intensity.
(4) Operator maintenance.
(a) TM 11-series-12.
(b) Operator checklists.

643.5 Forty-Third Period (100 min).

a. *Lesson objective.* To familiarize the student with the alinement procedures for the local radar set.

b. *Lesson outline.*
(1) PPI display alinement.
(2) PAR alinement.
(3) Height finder alinement.
(4) Review lesson material.

643.6 Forty-Fourth Period: Written Test and Critique Covering the Forty-Second and Forty-Third Periods of Instruction (50 min).

643.7 Forty-Fifth Period (100 min).

a. *Lesson objective.* To familiarize the student with basic IFF operations theory and identify specific Army IFF equipment.

b. *Lesson outline.*
(1) System components.
(a) Interrogator.
(b) Transponder.
(2) IFF presentation.
(a) IFF coverage.
(b) Aircraft altitude.
(c) False targets due to reflections.
(d) Reduce resolution with interrogation side-lobe supression (ISLS).
(e) Reduce ring around with ISLS.
(f) Slant range.
(g) IFF interference.
(3) IFF component function.
(a) Interrogator.
(b) Transponder.
(c) Decoder.
(d) Interlacing.
(e) Emergency signal.
(f) Code assignment.
(4) Review lesson material.

643.8 Forty-Sixth Period (200 min).

a. *Lesson objective.* To acquaint the student with the use, procedures, and minima for the local radar equipment.

b. *Lesson outline.*
(1) Procedures and minima.
(a) Controlled airspace within radar range.
(b) Below MEA.
(c) Special VFR flights.
(d) Vectoring.
(e) Phraseology.
(f) Gyro out procedures.
(2) Radar use.
(a) Position information.
(b) Vectoring.
(c) Traffic information.
(d) Radar navigation.
(e) Assistance when in distress.
(f) Weather information.
(g) Precision approaches.
(h) Surveillance approaches.
(i) Monitoring instrument approaches.
(3) Review lesson material.

643.9 Forty-Seventh Period (150 min).

a. *Lesson objective.* To acquaint the student with the procedures and phraseology required for radar identification and handoff.

b. *Lesson outline.*
(1) General procedures.
(a) Presentation and equipment performance.
(b) Alinement check.
(c) Code monitor.
(d) Service limitations.
(e) Electronic cursor.
(f) ECM interference.
(g) Traffic information items.
(2) Beacon code assignment.
(a) General.
(b) Departures.
(c) Enroute.
(d) Arrivals.
(e) VFR on top or IFR cancellation.
(f) Emergencies.
(g) Standby or low sensitivity operation.
(h) Beacon termination.
(i) Inoperative interrogator.
(j) Inoperative transponder.
(k) VFR radar advisory service.
(3) Radar identification procedures.
(a) Application.
(b) Identification status.
(c) Primary radar identification methods.
(d) Beacon identification methods.
(e) Questionable identification.
(f) Position information.
(g) Code assignment.
(4) Vectoring procedures.
(a) Application.
(b) Vectors within radar coverage.
(c) Vector methods.
(d) Off-route vectors.
(e) Deviation advisories.
(f) Position reporting.
(5) Radar handoff procedures.
(a) Application.

(b) Handoff.
(c) Communications transfer.
(d) Confirmation.
(e) Control transfer.
(6) Review of lesson material.

643.10 Forty-Eighth Period (150 min).

a. Lesson objective. To acquaint the student with the procedures and phraseology for radar separation and departure.

b. Lesson outline.

(1) Radar separation procedures.
(a) Application.
(b) Target separation.
(c) Beacon range accuracy.
(2) Radar separation minima.
(a) Application.
(b) Passing or diverging.
(c) Departures and arrivals.
(d) Departures and arrivals on parallel runways.
(e) Departures and arrivals on diverging runways.
(f) Adjacent airspace.
(g) Edge of scope.
(h) Beacon target displacement.
(i) Guidance platform assembly (GPA) 102/103 correction factor.
(j) Obstructions.
(3) Radar departure procedures.
(a) General.
(b) Initial heading.
(c) Code assignment.
(d) Vectors below minimum altitude.
(4) Review lesson material.

643.11 Forty-Ninth Period (200 min).

a. Lesson objective. To acquaint the student with radar arrival procedures and phraseology.

b. Lesson outline.

(1) Radar arrivals.
(a) Successive arrivals.
(b) Final approach course interception.
(c) Vectors to localizer course.
(d) Vectors through final approach course.
(e) Arrival instructions.
(f) Final approach separation responsibility.
(g) Visual approach.
(2) Speed adjustments.
(a) Application.
(b) Methods.
(c) Excessive adjustments.
(d) Speed minima.
(e) Adjustment limitations.
(f) Adjustment termination.
(3) Radar approaches.
(a) Application.
(b) Approach information.
(c) Lost communications.
(d) No-gyro approach.
(e) Radar contact lost.
(f) Cockpit check.
(g) Position information.
(h) Final controller changeover.
(i) Communications check.
(j) Transmission acknowledgement.
(k) Wheels down check.
(l) Tower clearance.
(4) Surveillance approach.
(a) Approach information.
(b) Descent notification.
(c) Descent instructions.
(d) Descent restrictions.
(e) Final approach information.
(f) Altitude guidance termination.
(h) Approach completion.
(5) Precision Approach.
(a) Glidepath notifications.
(b) Descent instructions.
(c) On glidepath and course.
(d) Deviation from glidepath and course.
(e) Distance from touchdown.
(f) Position advisory.
(g) Approach completion.
(h) Abandon approach.
(i) Elevation failure.
(6) Approach monitoring.
(a) Application.
(b) Advisory ability, information, and termination.
(7) Review lesson material and practice associated phraseology.

643.12 Fiftieth Period (50 min).

a. Lesson objective. To acquaint the student with procedures and phraseology for radar additional services.

b. Lesson outline.

(1) Additional services and phraseology.
(a) Application.
(b) Traffic information.
(c) Vectors.
(d) Traffic no longer a factor.
(e) Safety advisory.
(f) Altitude conflict.
(g) Weather and chaff information.
(h) Bird activity.
(i) Holding pattern surveillance.
(j) Navigational guidance.
(2) Expanded terminal radar service.
(a) Application.
(b) Service availability.
(c) Traffic information.
(d) Initial contact.
(e) Landing information.
(f) Identification.
(g) Holding.
(h) Landing sequence.

(*i*) VFR sequencing.
(*j*) IFR sequencing for visual approach.
(*k*) Visual approach.
(*l*) Control transfer.
(*m*) Sequencing light aircraft.
(*n*) Abandoned approach.
(*o*) VFR departure information.
(3) Merging target procedures.
(*a*) Application.
(*b*) Traffic information.
(*c*) Avoidance vectors.
(4) Review lesson material and practice associated phraseology.

643.13 Fifty-First Period: Written Test and Critique Covering the Forty-Fifth Through Fiftieth Periods of Instruction (50 min).

644. Block D, Tactical Equipment.

644.1 Fifty-Second Period.

Note: All training on tactical ATC equipment will be conducted using the applicable operator manuals and reference documents. The type of equipment upon which training will be given will be based upon equipment authorization and usage.

a. Lesson objective. To familiarize the student with the setup and operation of tactical ATC equipment.

b. Lesson outline.
(1) Installation.
(2) Operation.
(3) Operator maintenance.

644.2 Fifty-Third Period: Written Test and Critique Covering the Fifty-Second Period of Instruction (Tactical ATC Equipment).

APPENDIX A

TRAINING AND PROFICIENCY RECORD - AIR TRAFFIC CONTROLLER

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

GENERAL INFORMATION

This form consists of Sections I through IX. It will be used as an authoritative source of information and reference in regard to the individual's training record as air traffic controller in the United States Army and as a comprehensive training progress report. Required entries within this form will be recorded by the ATC/ facility chief or the training NCO/supervisor.

SECTION I - PERSONAL IDENTIFYING DATA

NAME (Last, first, middle initial)	ASGD INIT (Pencil)	RANK (Pencil)	CTO NUMBER	ATCS NO.	PMOS	DMOS (Pencil)

EXPIRATION DATE OF FLIGHT PHYSICAL (Pencil)	EXPIRATION TERM OF SERVICE (Pencil)

SECTION II - AIR TRAFFIC CONTROLLER SCHOOLS ATTENDED

NAME OF SCHOOL	LOCATION	DATE COMPLETED

If additional space is needed for Section II, continue on additional Section II. See Section III, page 2.

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SECTION III - INTERVIEW DATA				
DATE	REASON	ACTION	INITIALS	
			ATC	SUPV

If additional space is needed for Section III, continue on additional Section III. See Section IV, page 3.

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SECTION IV - ASSIGNMENTS				
NAME AND LOCATION OF FACILITY TO WHICH ASSIGNED	DUTIES PERFORMED	DATE ASSIGNED		TYPE CERTIFICATES AWARDED, DATES AND REMARKS
		FROM	TO	

If additional space is needed for Section IV, continue on additional Section IV. See Section V, page 4.

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SECTION V - QUALIFICATION, PROFICIENCY, AND REMEDIAL TRAINING RECORD

SUBJECT	TYPE	DATES		HOURS	INSTRUCTOR'S SIGNATURE
		FROM	TO		

If additional space is needed for Section V, continue on additional Section V. See Section VI, page 5.

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SECTION VI - WRITTEN/ORAL/PRACTICAL TEST ACTION

SUBJECT	DATE	SCORE	REMARKS

If additional space is needed for Section VI, continue on additional Section VI. See Section VII, page 6.

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SECTION VII - PROFICIENCY CHECKS

POSITION	DATE	SCORE	HOURS	INITALS		REMARKS
				ATC	SUPV	

If additional space is needed for Section VII, continue on additional Section VII. See Section VIII, page 7.

SECTION VIII
INDIVIDUAL RADAR RECORD

YEAR 19	PAR		ASR			MONITOR		TOTAL
	FINAL	EMERG NO GYRO	PATTERN	FINAL	EMERG NO GYRO	ARRIVAL	DEPAR-TURE	
JANUARY								
FEBRUARY								
MARCH								
APRIL								
MAY								
JUNE								
JULY								
AUGUST								
SEPTEMBER								
OCTOBER								
NOVEMBER								
DECEMBER								
TOTAL RUNS FOR YEAR								
TOTAL RUNS BROUGHT FORWARD								
TOTAL RUNS								

FACILITY CHIEF SIGNATURE, DATE	CONTROLLER SIGNATURE, DATE

See Section IX, page 8.

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SECTION IX - MISCELLANEOUS GENERAL COMMENTS
1
2
3
4
5
6
7

APPENDIX B

POSITION LOG

AIR TRAFFIC CONTROL POSITION LOG
For use of this form, see FM 1-200; the proponent agency is the U.S. Army Communications Command.

POSITION	DATE

INITIALS	TIME ON	TIME OFF

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AIR TRAFFIC CONTROL POSITION LOG
For use of this form, see FM 1-200; the proponent agency is the U.S. Army Communications Command.

POSITION	DATE

INITIALS	TIME ON	TIME OFF

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AIR TRAFFIC CONTROL POSITION LOG
For use of this form, see FM 1-200; the proponent agency is the U.S. Army Communications Command.

POSITION	DATE

INITIALS	TIME ON	TIME OFF

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AIR TRAFFIC CONTROL POSITION LOG
For use of this form, see FM 1-200; the proponent agency is the U.S. Army Communications Command.

POSITION	DATE

INITIALS	TIME ON	TIME OFF

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APPENDIX C

TRAINEE/CONTROLLER EVALUATION For use of this form, see FM 1-200; the proponent agency is US Army Communications Command			DATE
TRAINEE/CONTROLLER EVALUATION			
NAME	GRADE	ATCS NO.	EVALUATION NO.
TYPE TRAINING	POSITION EVALUATED		

KNOWLEDGE			
ITEM	SAT	UNSAT	REMARKS
AREA			
EQUIPMENT			
CONTROL INFORMATION			
TECHNIQUE			
DECISIONS			
PROCEDURES			
COORDINATION			
JUDGMENT			
PHRASEOLOGY			

VOICE QUALITY

- ☐ EXCELLENT
- ☐ SATISFACTORY
- ☐ UNSATISFACTORY
- ☐ FAST
- ☐ SLOW
- ☐ LOUD
- ☐ SOFT
- ☐ HESITANT
- ☐ SING SONG
- ☐ HAD TO REPEAT FREQUENTLY
- ☐ SPOKE BEFORE KEYING MIKE

SELF CONFIDENCE

- ☐ SOUND AND SURE
- ☐ GOOD-SURE MOST OF THE TIME
- ☐ FAIR-SOME HESITANCY
- ☐ HESITANT AND UNSURE
- ☐ OVERCONFIDENT TENDENCY
- ☐ OVERREACHING RESPONSIBILITIES

TRAINER COMMENTS

OVERALL RATING	ATTITUDE	EMOTIONAL STABILITY	TRAFFIC CONDITION (COMPARED TO NORMAL LOCAL LEVEL) (CHECK ONE IN EACH COLUMN)	
☐ SATISFACTORY ☐ UNSATISFACTORY	☐ EXCELLENT ☐ RECEPTIVE ☐ UNRECEPTIVE	☐ EXCELLENT ☐ SATISFACTORY ☐ UNSATISFACTORY ☐ NERVOUS	☐ INSUFFICIENT ☐ LIGHT ☐ MODERATE ☐ HEAVY	☐ STABLE ☐ FLUCTUATING

TYPED/PRINTED NAME & GRADE	SIGNATURE

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CONTROLLER/TRAINEE COMMENTS	DATE
THE UNDERSIGNED ☐ AGREES ☐ DISAGREES (if you disagree with evaluation, refer to specific items of contention in your comments.)	
TYPED/PRINTED NAME AND GRADE	SIGNATURE
REVIEWING AUTHORITY	DATE
COMMENTS	
TYPED/PRINED NAME, GRADE & TITLE	SIGNATURE

I certify that I have read the comments of the Reviewing Authority on the date indicated.	TRAINEE		TRAINER	
	INITIALS	DATE	INITIALS	DATE

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APPENDIX D

REFERENCES AND FILES

Publication	Title	Facility reference file	Controller training file	Daily operating file
D-1. Army Regulations (AR)				
40-501	Standards of Medical Fitness	(*)		
95-1	Army Aviation: General Provisions and Flight Regulations	(*)	(**)	(**)
95-5	Aircraft Accident Prevention, Investigation, and Reporting	(*)	(*)	
95-9	Terminal Air Navigation and Air Traffic Control Facilities	(*)	(*)	
95-14	Army Aviation Flight Information	(*)	(**)	
95-21	Security Control of Air Traffic and Air Navigation Aids (SCATANA)	(*)	(**)	
95-24	Army Airfield and Heliport Air Traffic Activity Report	(*)	(*)	(**)
95-26	Aircraft Firefighting and Rescue	(*)	(**)	
95-37	Army Air Traffic Controller, Certification, Training, Ratings, and Awards	(*)	(*)	
95-50	Airspace and Terminal Instrument Procedures	(*)	(**)	
(C)105-2	Electronic Counter-countermeasures (ECM)-Electronic Warfare Susceptability and Vulnerability (U)	(**) (See para 324.4)		
(C)105-3	Reporting Meaconing, Intrusion, Jamming, and Interference of Electromagnetic Systems (U)	(**) (See para 324.4)		
(C)105-87	Electronic Warfare (U)	(**) (See para 324.4)		
350-1	Army Training	(**)		
380-5	Department of the Army Supplement to DOD 5200.1-R (DODISPR)	(**)		
385-40	Accident Reporting and Records	(*)		
D-2. Field Manuals (FM)				
1-55	Guide for the Operation of Army Airfields	(*)		
1-60	Army Air Traffic Management in the Combat Zone	(*)		
1-200	Air Traffic Control Facility Operations and Training	(*)	(*)	(*)
(C)32-20	Electronic Warfare (EW) (U)	(**) (See para 324.4)		
32-30	Electronic Warfare, Tactics of Defense	(**)		
44-30	Visual Aircraft Recognition		(*)	
90-1	Employment of Army Aviation Units in a High Threat Environment	(**)		
100-42	US Army Airspace Management in an Area of Operations	(*)	(**)	
D-3. Technical Manuals (TM)				
11-5840-281-12	Operator's and Organizational Maintenance Manual: Radar Set AN/TPN-18	(*)	(*) (If system installed)	(*)
11-5840-293-12	Operator's and Organizational Maintenance Manual: Radar Set AN/FPN-40 (with IFF capability)	(*)	(*) (If system installed)	(*)
95-225	US Standard Flight Inspection Manual (USSFIN) Handbook OAP 8200.1	(*)		
95-226	US Standard for Terminal Instrument Procedures (TERPS)	(*)		
95-228	US Interagency Ground Inspection Manual ATC and Navigation Aid Facilities	(*)		

See notes below table.

Publication	Title	Facility reference file**	Controller training file	Daily operating file
D-4. Technical Bulletins (TB)				
95-1	US Army Air Traffic Control and NAVAID Facility Standards	(*)		
D-5. Federal Air Regulations (FAR)				
Part			(**) (CONUS only)	
65	Certification Aircrewman other than Flight Crew Members	(*)	(**)	
67	Medical Standards and Certification	(**)		
91	General Operating and Flight Rules	(*)	(**)	
105	Parachute Jumping	(**)		
D-6. FAA Handbooks/Orders (FAAH/FAAO)				
7110.65	Air Traffic Control	(*)	(*)	(*)
7220.1	Air Traffic Control Certification Procedures	(*)	(*)	
7340.1	Contractions	(*)		(**)
7350.1	Location Identifiers	(**)		(*)
7610.4	Special Military Operations	(*)		
8080.1	Conduct of Airman Written Test	(*)		
8260.19	Flight Procedures and Airspace	(*)		
D-7. ICAO Manuals				
7910	Location Identifiers (Overseas only)	(**)		(*)
D-8. Airman Information Manual (1 copy, four parts)		(**)		
D-9. DOD Flight Information Publications				
	High Altitude Instrument Approach Procedures	(**)	(If applicable, for area of coverage)	
	Low Altitude Instrument Approach Procedures	(*)	(For area of coverage)	
	Low Altitude Charts	(*)	(For area of coverage)	
	High Altitude Charts	(**)	(If applicable, for area of coverage)	
	IFR Supplement	(*)		
	VFR Supplement	(*)		
	Planning Data and Procedures	(**)		
D-10. Letters of agreement		(*)	(*)	(*)
D-11. Operations letters		(*)	(*)	(*)

*Mandatory.
**Need not be maintained if practical access is available elsewhere.

GCA OPERATIONS LOG

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

1. FACILITY	2. FACILITY CHIEF (SIGNATURE)	3. DATE

FLIGHT PLAN A		AIRCRAFT		RADAR ID TIME	TYPE APRCH	OPERATIONS						RELEASE TIME	REMARKS
						ASR		PAR	MONITOR		SIMUL		
IFR	VFR	IDENT B	TYPE C	D	E	PAT F	FIN G	FIN H	ARR I	DEP J	K	L	M
		ENTER TOTALS IN COLUMNS AT LEFT. (TOTAL NUMBER OF IFR OPERATIONS) (TOTAL NUMBER OF VFR OPERATIONS)		TOTAL IFR								/////	//////////
				TOTAL VFR								/////	//////////

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APPENDIX F

DAILY REPORT OF AIR TRAFFIC CONTROL FACILITY

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

LOCATION	TYPE FACILITY	DATE

TIME OUT	REMARKS

THE ENTRIES ABOVE ARE CORRECT; ALL SCHEDULED OPERATIONS HAVE BEEN ACCOMPLISHED, EXCEPT AS NOTED, AND ALL ABNORMAL OCCURRENCES AND CONDITIONS HAVE BEEN RECORDED.

SIGNATURE (ATC/FACILITY CHIEF)	DATE

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1 JUN 78

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ATC FACILITY PERSONNEL STATUS REPORT

1. DETACHMENT/AGENCY	2. AAF/AHP	3. DATE (MONTH/YEAR)

4. HOURS OF OPERATION

a. TOWER b. GCA c. ARAC

d. FOC e. FCC f. OTHER

CONTROL POSITIONS MANNED

5.	TOWER						APPROACH CONTROL/GCA										FOC/FCC/OTHER				
	WC	LC	GC	FD	CD	GR	WA	AC	AR	ASR	PAR	DC	DR	AD	CA	CI	WF	FC	FF		
FIRST SHIFT (TO)																					
SECOND SHIFT (TO)																					
THIRD SHIFT (TO)																					

6. EML a. TOWER b. GCA c. ARAC d. FOC e. FCC f. OTHER

7. PERSONNEL

NAME	GRADE	MOS	ATCS NO	DATE ASSIGNED	DATE RATED	DUE TO DEPART	TOE/STRAF

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When this form is filled out, the information will be treated as official use only. Information contained in this form is covered by Systems Notice 1111-16

7. (CONTD.) PERSONNEL

NAME	GRADE	MOS	ATCS NO.	DATE ASSIGNED	DATE RATED	DUE TO DEPART	TOE/STRAF

8. REMARKS:

DATE:	PREPARED BY:	AUTHENICATION OFFICER:

DA FORM 3479-6R

INSTRUCTIONS FOR PREPARING DA FORM 3479-6R

The following instructions are provided for use in preparing the ATC Facility Personnel Status Report.

a. Block 1, Detachment/Agency. Enter the detachment/agency which has control/command of the ATC facility identified in the report.

b. Block 2, AAF/AHP. Enter the name of the AAF/AHP at which the ATC facility personnel are providing ATC services.

c. Block 3, Date. Enter the month and year which this report covers.

d. Block 4, Hours of Operation. Enter the number of hours per day and days per week for each facility. More than one entry may be required to indicate different hours of operation (for example, M-F/16, S-S-H/8).

e. Block 5, Manned Positions. Enter an X under each position which is manned by an individual dedicated to that position during each shift. If an individual has the responsibility for more than one position during a given shift, position responsibility shall be indicated by entering C1 under each position. Should additional positions be combined and assigned to a second individual, this would be indicated by entering C2 under these positions, ad infinitum.

f. Block 6, Emergency Manning Level (EML). Enter the validated EML for each facility.

g. Block 7, Personnel. Enter all ATC personnel assigned by name, grade, MOS, ATCS no., date assigned, date rated, and date due to depart. Also, indicate whether individual is a TOE/STRAF controller. Separate continuation sheets may be used.

(1) Name. Last, first, and middle initial. In the case of the ATC/facility chief, training NCO, add job title (for example, Leader, Robert J (ATC Chief)).

(2) Grade. Appropriate grade of each individual (for example, SP4, SSG, or GS-11).

(3) MOS. The primary MOS; if duty MOS is different than the primary MOS, it shall be reflected in Block 8 (Remarks).

(4) ATCS number. The number assigned the individual on ATCS Certificate, FAA Form 7220-1.

(5) Date assigned. Date individual is assigned to the facility for ATC duties.

(6) Date rated. Date a facility rating is issued for that facility. This date will correspond with the date entered on the ATCS.

(7) Date due to depart. This column will be used to indicate 30, 60, 90, etc, day losses.

(8) TOE/STRAF. A check mark in this column will indicate an individual is a TOE/STRAF type controller assigned to the facility for duty.

h. Block 8, Remarks. Enter information as listed below.

(1) TDA/TOE authorization.

(2) Projected 90-day gains.

(3) Projected 90-day losses.

(4) Requisitions submitted.

(5) Requisitions validated.

(6) Clarification of personnel information to include—

(*a*) TDY (purpose, destination, and duration).

(*b*) PCS (destination and reporting date at gaining organization).

(*c*) ETS.

(*d*) Additional duties (for example, ATC/facility chief, training NCO, CTO/ATCS examiner, etc).

(*e*) Training status.

(*f*) Dual-rated.

(*g*) Reason for not being facility rated in prescribed period of time.

(*h*) Reason for not working in facility.

(*i*) Reclassification action (pending or completed) and reasons.

(*j*) Reenlistments.

(*k*) Other.

(7) Monthly total of traffic activity by shift.

Note. If additional space is needed, continue on plain paper.

APPENDIX H

PROGRESS AND CERTIFICATION RECORD

FOR

CONTROL TOWER

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

THIS PROGRESS AND CERTIFICATION RECORD CONTAINS THE KNOWLEDGE AND TASKS NORMALLY REQUIRED TO PERFORM AT THE FLIGHT DATA, GROUND CONTROL, LOCAL CONTROL, AND NONRADAR APPROACH CONTROL POSITIONS. PART I AND II ARE COMMON TO ALL POSITIONS. PARTS III, IV, V, AND VI ARE DIVIDED FOR EACH OPERATING POSITION. THE FACILITY CHIEF MAY ADD TO, DELETE FROM, OR MODIFY THIS RECORD TO SATISFY LOCAL REQUIREMENTS.

TRAINEE		
NAME	*GRADE*	*ATCS NO.*

PREVIOUS EDITIONS ARE OBSOLETE

DA FORM 3479-2R
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PART I - CONTROL TOWER EQUIPMENT				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DESCRIBE THE TYPE EQUIPMENT AVAILABLE AND THE OPERATIONAL CHARACTERISTICS OF EACH.				
1. RADIO/LANDLINE COMMUNICATIONS SYSTEMS.				
2. WEATHER EQUIPMENT.				
A. WEATHER RECEIVING EQUIPMENT.				
B. WIND INDICATORS.				
C. ALTIMETER SETTTING INDICATOR.				
D. RUNWAY VISUAL RANGE EQUIPMENT				
3. RECORDERS.				
4. AIRFIELD LIGHTING SYSTEMS.				
5. NAVAID MONITORS.				
6. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS).				
7. LIGHT GUNS AND OTHER VISUAL SIGNALING DEVICES.				
8. CLOCKS.				
9. EMERGENCY POWER EQUIPMENT.				
10. EMERGENCY EGRESS SYSTEMS.				
11. EVACUATION ALARMS.				
12. LOCAL GRID MAPS.				
13. BRITE (IF APPLICABLE).				

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PART II - OPERATIONAL AREA KNOWLEDGE				
NOTE: THE OPERATIONAL AREA IS THE AREA DESIGNATED AS THE FACILITY'S CONTROL AREA, UNLESS A GREATER DISTANCE IS SPECIFIED BY THE FACILITY CHIEF.				
	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. DESCRIBE AIRPORT.				
A. FIELD ELEVATION.				
B. RUNWAYS/HELIPADS, AND OTHER LANDING AREAS (IDENTITY, LENGTH, AND WIDTH).				
C. TAXIWAYS (IDENTITY AND WIDTH).				
D. RAMPS.				
(1) PARKING.				
(2) REFUELING.				
(3) RUNUP.				
E. LOCATION OF VISUAL AND RADIO BLIND SPOTS.				
F. ILS CRITICAL AREAS.				
G. VOR RECEIVER CHECKPOINTS.				
2. DESCRIBE AIRPORT TRAFFIC PATTERNS.				
3. DESCRIBE SPECIAL ATC AIRPORT PROCEDURES.				
4. DESCRIBE LOCAL AIRCRAFT CHANNELIZATION.				
5. KNOW THE BEARING, DISTANCE, FREQUENCY/CHANNEL AND IDENTIFICATION OF THE FOLLOWING NAVAID/FIXES.				
A. VOR/VORTAC/TACAN/NDB.				
B. ILS.				
C. FIXES.				
(1) VFR REPORTING POINTS.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
(2) APPROACH GATES.				
(3) FINAL APPROACH FIXES.				
(4) RELEASE POINTS.				
(5) HOLDING POINTS.				
6. DESCRIBE.				
A. CONTROL ZONE DIMENSIONS.				
B. AIRPORT TRAFFIC AREA.				
C. AIRWAYS.				
D. LOCATION OF ALL AIRPORTS, INCLUDING ATC FACILITIES AVAILABLE.				
E. RESTRICTED AIRSPACE.				
F. DF NET CONTROL STATION LOCATION.				
7. DESCRIBE.				
A. SID.				
B. ALL INSTRUMENT APPROACH PROCEDURES PUBLISHED FOR YOUR AIRPORT.				

PART III - PERFORMANCE OF FLIGHT DATA TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DEMONSTRATE THE KNOWLEDGE AND ABILITY REQUIRED FOR THE FOLLOWING:				
1. TAPE RECORDERS.				
A. CHANGE, MARK, AND FILE TAPES.				
B. PLAYBACK.				
C. QUALITY CHECKS.				
D. REMOTE MONITORS.				
E. FAILSAFE.				
2. FLIGHT PROGRESS STRIPS.				
A. INBOUND.				
(1) FORMAT.				
(2) MARKING.				
B. OUTBOUND.				
(1) FORMAT.				
(2) MARKING.				
3. LOGS, FORMS, AND RECORDS.				
4. CLOCKS/TIME CHECKS.				
5. INTERPHONE SYSTEM.				
6. INTERCOM.				
7. TELEPHONES.				
8. CONSOLE EQUIPMENT.				
9. DF NET/COORDINATION.				
10. SID.				
11. COPY, RELAY, AND PRIORITY OF:				
A. CLEARANCES.				
B. WEATHER DATA.				
C. NOTAM.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
D. REQUEST FOR INFORMATION FROM NON-ATC AGENCIES.				
12. SPECIAL PROCEDURES.				
A. CRASH PROCEDURES.				
B. ALERTING AGENCIES FOR LOST OR OVERDUE AIRCRAFT.				
C. VIP.				
D. DANGEROUS CARGO.				
E. MED-EVACS.				
13. MAINTENANCE PERSONNEL NOTIFICATION.				
14. RUNWAY PROCEDURES.				
A. SELECTION/CHANGING RUNWAY IN USE.				
B. OPENING/CLOSING.				
15. FACILITY REFERENCE/INFORMATION FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				

PART IV - PERFORMANCE OF GROUND CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. FLIGHT PROGRESS STRIPS.				
A. FORMAT.				
B. MARKINGS.				
2. LOGS, FORMS, AND RECORDS.				
3. PHRASEOLOGY.				
4. NAVAID MONITORING.				
5. CONTROL OF TAXIING AIRCRAFT.				
A. MOVEMENT AREA.				
B. PREFERRED TAXI ROUTES.				
C. ILS CRITICAL AREA.				
D. TRAFFIC FLOW.				
E. CONTROL TRANSFER.				
F. LOCAL PROCEDURES/RESTRICTIONS.				
G. CONTINUAL SURVEILLANCE.				
6. SPECIAL PROCEDURES.				
A. ATIS.				
B. DANGEROUS CARGO.				
C. HIJACK.				
D. BOMB THREAT.				
E. BASE DISASTER EXERCISE.				
F. EXTERNAL STORES/FUEL DUMP AREAS.				
G. SCRAMBLE, RECOVERY, OR OTHER TACTICAL PROCEDURES.				
H. AIRCRAFT PRIORITIES.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
I. INTERSECTION DEPARTURES.				
J. IFF/SIF/MODE/CODE ASSIGNMENTS.				
K. CRASH PHONE.				
L. EVACUATION OF FACILITIES.				
M. COORDINATION.				
N. FLIGHT INSPECTION.				
O. EXCEPTIONS TO STANDARD PROCEDURES.				
P. LOCAL AIRCRAFT CHARACTERISTICS.				
7. ADVISORIES.				
A. TRAFFIC				
B. OBSTRUCTIONS/FIELD CONDITIONS.				
C. NOTAM/NAVAID OUTAGES.				
D. WEATHER.				
(1) LIMITED OBSERVATIONS.				
(2) WARNINGS.				
(3) RVR/RVV.				
8. CLEARANCE DELIVERY.				
A. RAMP/GATE/HOLD.				
B. LOCAL REQUIREMENTS.				
9. VEHICLE CONTROL.				
A. EMERGENCY.				
B. OTHERS.				
10. FACILITY INFORMATION/REFERENCE FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				

PART V - PERFORMANCE OF LOCAL CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DEMONSTRATE THE KNOWLEDGE ABILITY REQUIRED OF THE FOLLOWING:				
1. FLIGHT PROGRESS STRIPS.				
A. FORMAT.				
B. MARKING.				
2. LOGS, FORMS, AND RECORDS.				
3. PHRASEOLOGY.				
4. RUNWAY PROCEDURES.				
A. SELECTION/CHANGING RUNWAY IN USE.				
B. OPENING/CLOSING.				
C. NOTIFICATION PROCEDURES.				
D. OVERRUN INFORMATION.				
5. COORDINATION.				
A. OTHER ATC FACILITIES.				
B. GROUND CONTROL.				
C. FLIGHT DATA.				
D. OTHER.				
6. ADVISORIES.				
A. TRAFFIC.				
B. OBSTRUCTIONS.				
C. WHEELS CHECK.				
D. COMMUNICATIONS TRANSFER				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
E. DIVERT.				
F. NOTAM/NAVAID OUTAGES.				
G. WEATHER				
(1) LIMITED OBSERVATIONS.				
(2) WARNINGS.				
(3) RVR/RVV.				
7. SEPARATION/SEQUENCING STANDARDS FOR IFR/VFR TRAFFIC.				
A. ARRIVALS.				
B. DEPARTURES.				
C. OVERFLIGHTS.				
D. REDUCED RUNWAY.				
E. SPECIAL VFR/IFR.				
F. CLOSED TRAFFIC.				
8. APPROACHES.				
A. VISUAL.				
B. CONTACT.				
C. RADAR.				
D. NON RADAR.				
E. CIRCLING.				
F. SIMULTANEOUS SAME DIRECTION.				
G. TO PARALLEL/INTERSECTION RUNWAYS.				
H. SIMULTANEOUS OPPOSITE DIRECTION.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
9. MISSED APPROACH PROCEDURES.				
A. VFR/IFR.				
B. RADAR.				
10. SPECIAL PROCEDURES.				
A. DANGEROUS CARGO.				
B. HIJACK.				
C. BOMB THREATS.				
D. BASE DISASTER EXERCISES.				
E FLIGHT INSPECTION.				
F. EXTERNAL STORES/FUEL DUMP AREAS.				
G. SCRAMBLE, RECOVERY, OR OTHER TACTICAL PROCEDURES.				
H. PREVENTIVE CONTROL.				
I. UNUSUAL MANEUVERS.				
J. IFF/SIF MODE/CODE ASSIGNMENTS.				
K. INTERSECTION DEPARTURES.				
L. LOCAL AIRCRAFT CHARACTERISTICS.				
M. EXCEPTIONS TO STANDARD PROCEDURES.				
11. EMERGENCY PROCEDURES.				
A. ALERTING EMERGENCY EQUIPMENT.				
B. COORDINATION.				
12. NAVAID MONITORING.				
13. AIRFIELD LIGHTING CONTROL.				
14. FACILITY INFORMATION REFERENCE FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				
15. BRITE (IF APPLICABLE).				

PART VI - PERFORMANCE OF NON RADAR APPROACH CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DEMONSTRATE THE KNOWLEDGE AND ABILITY REQUIRED FOR THE FOLLOWING:				
1. FLIGHT PROGRESS STRIPS.				
A. FORMAT.				
B. MARKING.				
2. LOGS, FORMS, AND RECORDS.				
3. PHRASEOLOGY.				
4. APPROACH CONTROL PROCEDURES.				
A. CONTROL TRANSFER.				
B. MISSED APPROACHES.				
C. TIMED APPROACHES.				
D. AIRCRAFT PRIORITY.				
E. COPY/RELAY/ISSUE ATC CLEARANCES.				
F. SPECIAL VFR/IFR.				
G. EAC/EFC/HOLDING.				
5. APPROACHES.				
A. RADAR.				
B. INSTRUMENT (NON RADAR)				
C. CIRCLING.				
D. VISUAL.				
E. CONTACT.				
F. SIMULTANEOUS SAME DIRECTION.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
G. SIMULTANEOUS OPPOSITE DIRECTION.				
H. TO PARALLEL RUNWAYS/INTERSECTING RUNWAY.				
6. SPECIAL PROCEDURES.				
A. DANGEROUS CARGO.				
B. BASE DISASTER EXERCISE.				
C. FLIGHT INSPECTION.				
D. EXTERNAL STORES/FUEL DUMP AREAS.				
E. SCRAMBLE/RECOVERY OR OTHER TACTICAL PROCEDURES.				
F. UNUSUAL MANEUVERS.				
G. MINIMUM/EMERGENCY FUEL AIRCRAFT.				
H. NORDO AIRCRAFT.				
I. ALERTING EMERGENCY EQUIPMENT.				
J. ALERTING AGENCIES FOR LOST OR OVERDUE AIRCRAFT.				
K. EVACUATION OF FACILITIES.				
L. NAVAID MONITORING.				
M. COORDINATION.				
N. AVOIDANCE OF RESTRICTED AIRSPACE.				
O. EXCEPTIONS TO STANDARD PROCEDURES.				
P. MAINTENANCE PERSONNEL NOTIFICATION.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
Q. EFFECT OF FIELD LIGHTING ON PUBLISHED MINIMA.				
R. HIJACK.				
S. BOMB THREAT.				
7. ADVISORIES.				
A. TRAFFIC.				
B. OBSTRUCTIONS/FIELD CONDITIONS.				
C. WHEELS CHECK.				
D. WEATHER CHANGES.				
E. OVERRUN INFORMATION.				
F. NOTAM/NAVAID OUTAGES.				
G. DIVERT.				
H. BIRDS				
8. RUNWAY PROCEDURES.				
A. SELECTION/CHANGING OF RUNWAY.				
B. OPENING/CLOSING.				
9. FACILITY REFERENCE/INFORMATION FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				

DA FORM 3479-2R

APPENDIX I

PROGRESS AND CERTIFICATION RECORD

FOR

TERMINAL RADAR

(ARAC)

(GCA)

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command.

THIS PROGRESS AND CERTIFICATION RECORD CONTAINS THE KNOWLEDGE AND TASKS NORMALLY REQUIRED TO PERFORM AT THE FLIGHT DATA ARRIVAL/DEPARTURE AND RADAR FINAL CONTROL POSITIONS. PART I AND II ARE COMMON TO ALL POSITIONS. PARTS III, IV, AND V ARE DIVIDED FOR EACH OPERATING POSITION. THE FACILITY CHIEF MAY ADD TO, DELETE FROM, OR MODIFY THIS RECORD TO SATISFY LOCAL REQUIREMENTS.

TRAINEE		
NAME	*GRADE*	*ATCS NO.*

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PREVIOUS EDITIONS ARE OBSOLETE

PART I - TERMINAL RADAR EQUIPMENT				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DESCRIBE THE TYPE EQUIPMENT AVAILABLE AND THE OPERATIONAL CHARACTERISTICS OF THE FOLLOWING:				
1. RADAR (INCLUDE SEARCH, PRECISION, AND SECONDARY SYSTEMS).				
A. CHARACTERISTICS.				
(1) COVERAGE (INCLUDE BLIND AREAS/ LIMITATIONS).				
(2) RANGES.				
(3) VIDEO MAPPING/OVERLAYS.				
(4) CURSORS.				
(5) ANGLE MARKS.				
(6) REFLECTORS.				
(7) ECM - ECCM.				
B. ALINEMENT/ADJUSTMENT PROCEDURES.				
(1) CONTROLS/FEATURES USED.				
(2) REQUIRED/DESIRED DISPLAYS.				
(3) ACCURACY.				
(4) LOCAL REQUIREMENTS.				
C. SPECIAL CIRCUITS/DEVICES (FTC, STC, AND/OR OTHER CIRCUITS/DEVICES USED BY YOUR FACILITY).				
2. RADIO/LANDLINE COMMUNICATION SYSTEMS (INCLUDE BLIND AREAS, FREQUENCIES, AND CIRCUITS AVAILABLE).				
3. WEATHER EQUIPMENT.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
A. WIND INDICATORS.				
B. ALTIMETER SETTING INDICATORS.				
C. WEATHER RECEIVING EQUIPMENT;				
D. LOCAL REQUIREMENTS.				
4. RECORDERS.				
5. NAVAID MONITORS.				

PART II - OPERATIONAL KNOWLEDGE				
NOTE: THE OPERATIONAL AREA IS THE FACILITY'S DESIGNATED CONTROL AREA/AIRSPACE UNLESS A GREATER DISTANCE IS SPECIFIED BY THE FACILITY CHIEF.				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. KNOW THE BEARING, DISTANCE, FREQUENCIES/CHANNEL, AND IDENTIFICATION OF THE FOLLOWING NAVAID/FIXES:				
A. VOR/VORTAC/TACAN/NDB.				
B. ILS.				
C. FIXES.				
(1) APPROACH GATES.				
(2) RELEASE POINTS.				
(3) RADAR HANDOFF POINTS.				
(4) VFR HOLDING AND REPORTING POINTS.				
2. DESCRIBE:				
A. AIRWAYS (INCLUDE INTERSECTIONS AND MEA).				
B. CONTROL AREA OR DESIGNATED AIRSPACE.				
C. AIRPORT TRAFFIC AREA.				
D. LOCATION OF ALL AIRPORTS IN THE CONTROL ZONE, INCLUDING ATC FACILITY.				
E. PUBLISHED HOLDING PATTERNS.				
F. RESTRICTED AIRSPACE.				
G. DF NET CONTROL STATION LOCATION.				
3. DESCRIBE EACH AIRPORT UNDER YOUR CONTROL JURISDICTION AS FOLLOWS:				
A. RUNWAYS (INCLUDE IDENTITY, LENGTH, WIDTH, AND OVERRUN INFORMATION).				
B. FIELD ELEVATION.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
C. LOCATION AND TYPE OF FIELD LIGHTING SYSTEMS.				
D. POSITION OF RADAR REFLECTORS REQUIRED FOR RADAR OPERATIONS TO YOUR AIRPORT.				
E. TRAFFIC PATTERNS (VFR AND IFR).				
4. STANDARD INSTRUMENT DEPARTURES (SID).				
5. DESCRIBE ALL INSTRUMENT APPROACH PROCEDURES PUBLISHED FOR AIRPORTS WITHIN YOUR CONTROL AREA OR DESIGNATED AIRSPACE.				
6. MINIMUM VECTORING ALTITUDE CHART USED BY YOUR FACILITY.				
7. LOCAL AIRCRAFT CHANNELIZATION.				

DA FORM 3479-3R,

PART III - PERFORMANCE OF FLIGHT DATA TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DEMONSTRATE THE KNOWLEDGE/ABILITY REQUIRED FOR THE FOLLOWING:				
1. TAPE RECORDERS.				
A. CHANGE, MARK, AND FILE.				
B. PLAYBACK PROCEDURES.				
C. QUALITY CHECKS.				
D. REMOTE MONITORS.				
E. FAILSAFE CIRCUITS.				
2. FLIGHT PROGRESS STRIPS.				
A. INBOUND.				
(1) FORMAT.				
(2) MARKINGS.				
B. OUTBOUND.				
(1) FORMAT.				
(2) MARKINGS.				
3. LOGS, FORMS, AND RECORDS.				
4. CLOCKS/TIME CHECKS.				
5. PHRASEOLOGY.				
6. INTERPHONE, INTERCOM AND TELEPHONE SYSTEMS.				
7. DF NET COORDINATION.				
8. STANDARD INSTRUMENT DEPARTURES (SID).				
9. COPY, RELAY, AND PRIORITY OF:				
A. CLEARANCES.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
B. WEATHER DATA.				
C. NOTAM.				
D. FIELD CONDITION INFORMATION.				
E. DIVERT ADVISORIES.				
F. REQUEST FOR INFORMATION FROM NON-ATC AGENCIES.				
10. SPECIAL OPERATING PROCEDURES.				
A. HANDOFFS/CONTROL TRANSFERS.				
B. AIRCRAFT PRIORITIES.				
C. DANGEROUS CARGO.				
D. BASE DISASTER EXERCISES.				
E. FLIGHT INSPECTIONS.				
F. EXTERNAL STORES/FUEL DUMP AREAS.				
G. SCRAMBLE, RECOVERY, OR OTHER TACTICAL PROCEDURES.				
H. IFF/SIF MODE/CODE ASSIGNMENTS.				
I. MINIMUM/EMERGENCY FUEL AIRCRAFT.				
J. NORDO/RECEIVER ONLY AIRCRAFT.				
K. ALERTING EMERGENCY EQUIPMENT.				
L. ALERTING AGENCIES FOR LOST OR OVERDUE AIRCRAFT.				
M. EVACUATION OF FACILITIES.				
N. NAVAID MONITORING.				
O. COORDINATION.				
P. EXCEPTIONS TO STANDARD PROCEDURES.				
Q. NOTIFICATION OF MAINTENANCE.				

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KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
R. LOCAL AIRCRAFT CHARACTERISTICS.				
S. HIJACK				
T. BOMB THREAT.				
11. RUNWAY PROCEDURES.				
A. SELECTION/CHANGING RUNWAY IN USE.				
B. OPENING/CLOSING.				
12. FACILITY INFORMATION/REFERENCE FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				

DA FORM 3479-3R

PART IV - PERFORMANCE OF RADAR ARRIVAL/DEPARTURE CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DEMONSTRATE THE KNOWLEDGE AND/OR ABILITY REQUIRED FOR THE FOLLOWING:				
1. RADAR.				
A. ALINEMENT PROCEDURES.				
B. OPERATOR'S MAINTENANCE.				
2. FLIGHT PROGRESS STRIPS.				
A. INBOUND.				
(1) FORMAT.				
(2) MARKINGS.				
B. OUTBOUND.				
(1) FORMAT.				
(2) MARKINGS.				
C. ENROUTE.				
(1) FORMAT.				
(2) MARKINGS.				
3. LOGS, FORMS, AND RECORDS.				
4. PHRASEOLOGY.				
5. SEPARATION/SEQUENCING/STANDARDS.				
A. ARRIVALS.				
B. DEPARTURES.				
C. ENROUTE.				
D. HOLDING.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
6. RADAR ARRIVALS/DEPARTURE CONTROL PROCEDURES.				
A. IDENTIFICATION.				
B. LOST COMMUNICATIONS.				
C. ALTITUDE VERIFICATION.				
D. HANDOFF/CONTROL TRANSFERS				
E. SUCCESSIVE APPROACH INSTRUCTIONS				
F. MISSED APPROACHES				
G. NO-GYRO CONTROL				
H. ALTERNATE CONTROL PROCEDURES WHEN RADAR FAILS				
I. TERMINATION OF RADAR SERVICE				
J. MULTI APPROACH PROCEDURES				
K. AIRCRAFT PRIORITIES				
L. COPY, RELAY, AND ISSUE OF ATC CLEARANCES				
M. SPECIAL VFR/IFR				
N. ASSISTANCE TO VFR AIRCRAFT IN WEATHER DIFFICULTY				
O. ASSISTANCE TO EMERGENCY AIRCRAFT				
P. USE OF SECONDARY RADAR FOR CONTROL PURPOSES				
Q. RESUMING NORMAL NAVIGATION				
7. APPROACHES				
A. RADAR				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
B. INSTRUMENT (NON-RADAR)				
C. CIRCLING				
D. VISUAL				
E. CONTACT				
F. SIMULTANEOUS SAME DIRECTION				
G. SIMULTANEOUS OPPOSITE DIRECTION				
H. TO PARALLEL/INTERSECTING RUNWAYS				
8. SPECIAL PROCEDURES				
A. DANGEROUS CARGO				
B. BASE DISASTER EXERCISES				
C. FLIGHT INSPECTIONS				
D. EXTERNAL STORES/FUEL DUMP AREAS				
E. UNUSUAL MANUEVERS				
F. SCRAMBLE, RECOVERY, OR OTHER TACTICAL PROCEDURES				
G. IFF/SIF MODE/CODE ASSIGNMENT				
H. MINIMUM/EMERGENCY FUEL AIRCRAFT				
I. NORDO/RECEIVER ONLY AIRCRAFT				
J. ALERTING EMERGENCY EQUIPMENT				
K. ALERTING AGENCIES FOR LOST OR OVERDUE AIRCRAFT				
L. EVACUATION OF FACILITIES				
M. NAVAID MONITORING				
N. COORDINATION				
O. INTERCEPT ANGLES WHEN VECTOR TO ILS OR PAR FINAL APPROACH COURSE				
P. EXCEPTIONS TO STANDARD PROCEDURES				
Q. NOTIFICATION OF MAINTENANCE				
R. EFFECT OF FIELD LIGHTING ON PUBLISHED MINIMA				
S. HIJACK				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
T. BOMB THREAT.				
9. ADVISORIES.				
A. TRAFFIC.				
B. OBSTRUCTIONS/FIELD CONDITIONS.				
C. WHEEL CHECKS.				
D. WEATHER OBSERVATIONS.				
E. WEATHER/CHAFF.				
F. RUNWAY OVERRUN INFORMATION.				
G. NOTAM/NAVAID OUTAGES.				
H. RADAR CONTACT/CONTACT LOST.				
I. DIVERT.				
J. BIRDS.				
10. RUNWAY PROCEDURES.				
A. SELECTION/CHANGING RUNWAY IN USE.				
B. OPENING/CLOSING.				
11. FACILITY REFERENCE/INFORMATION FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				

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PART V - PERFORMANCE OF RADAR FINAL CONTROL TASKS				
KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
DEMONSTRATE THE KNOWLEDGE AND/OR ABILITY REQUIRED FOR THE FOLLOWING:				
1. RADAR				
A. ALINEMENT.				
B. OPERATOR'S MAINTENANCE.				
2. FLIGHT PROGRESS STRIPS.				
A. FORMAT.				
B. MARKINGS.				
3. LOGS, FORMS, AND RECORDS.				
4. PHRASEOLOGY.				
5. FINAL APPROACH PROCEDURES.				
A. HANDOFFS/CONTROL TRANSFERS.				
B. IDENTIFICATION.				
C. LOST COMMUNICATIONS.				
D. SUCCESSIVE APPROACH INSTRUCTIONS.				
E. SEPARATION STANDARDS.				
F. COURSE/GLIDEPATH INFORMATION.				
G. TREND INFORMATION.				
H. LATERAL/VERTICAL SAFETY LIMITS.				
I. MISSED APPROACHES.				
J. NO-GYRO CONTROL.				
K. USE OF SURVEILLANCE APPROACH.				
L. USE OF PRECISION APPROACH.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
M. ALTERNATE CONTROL PROCEDURES WHEN RADAR FAILS.				
N. TERMINATION OF RADAR SERVICE.				
O. MULTIPLE APPROACHES.				
P. COPY, RELAY, AND ISSUE ATC CLEARANCES.				
Q. TRAINEE RESTRICTIONS/PHRASEOLOGY.				
6. ADVISORIES.				
A. TRAFFIC.				
B. OBSTRUCTIONS/FIELD CONDITIONS.				
C. APPROACHING GLIDEPATH.				
D. WHEEL CHECKS.				
E. WEATHER CHANGES.				
F. WEATHER/CHAFF.				
G. RUNWAY/OVERRUN INFORMATION.				
H. NOTAM/NAVAID OUTAGES.				
I. RADAR CONTACT/CONTACT LOST.				
J. ASR APPROACH MDAS AND PAR APPROACH DHS.				
K. OVERAPPROACH LIGHTS.				
L. OVERLANDING THRESHOLD.				
M. DIVERT.				
N. COMMUNICATIONS TRANSFER.				
O. BIRDS.				
7. SPECIAL PROCEDURES.				

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KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
A. EXCEPTIONS TO STANDARD PROCEDURES.				
B. BASE DISASTER EXERCISES.				
C. FLIGHT INSPECTIONS.				
D. EXTERNAL STORES/FUEL DUMP AREAS.				
E. IFF/SIF MODE/CODE ASSIGNMENT.				
F. EVACUATION OF FACILITIES.				
G. SCRAMBLE, RECOVERY, OR OTHER TACTICAL PROCEDURES.				
H. MINIMUM/EMERGENCY FUEL AIRCRAFT.				
I. RECEIVER ONLY AIRCRAFT.				
J. NOTIFICATION OF MAINTENANCE.				
K. ALERTING EMERGENCY EQUIPMENT.				
L. COORDINATION.				
M. EFFECT OF FIELD LIGHTING ON PUBLISHED MINIMA.				
N. HIJACK.				
O. BOMB THREAT.				
8. RUNWAY PROCEDURES.				
A. SELECTION/CHANGING RUNWAY IN USE.				
B. OPENING/CLOSING.				
9. FACILITY INFORMATION/REFERENCE FILES.				
A. LETTERS OF AGREEMENT.				
B. OPERATIONS LETTERS.				
C. FACILITY MEMORANDA.				
D. FLIP.				
E. OTHERS.				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER

APPENDIX J

PROGRESS AND CERTIFICATION RECORD

FOR

FLIGHT OPERATIONS CENTER

AND

FLIGHT COORDINATION CENTER

(FOC)

(FCC)

For use of this form, see FM 1-200; the proponent agency is US Army Communications Command

THIS PROGRESS AND CERTIFICATION RECORD CONTAINS THE KNOWLEDGE AND TASKS NORMALLY REQUIRED TO PERFORM AT THE FLIGHT DATA, FLIGHT FOLLOWING AND RADAR POSITIONS. PARTS I AND II ARE COMMON TO ALL POSITIONS. PARTS III, IV, AND V ARE DIVIDED FOR EACH OPERATING POSITION. THE FACILITY CHIEF MAY ADD TO, DELETE FROM, OR MODIFY THIS RECORD TO SATISFY LOCAL REQUIREMENTS.

TRAINEE

NAME	GRADE	ATCS NO.

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1 JUN 78

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PART I FOC/FCC

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. RADIO/LAND LINE COMMUNICATIONS SYS.				
2. WEATHER STATIONS				
3. RECORDERS				
4. NAVAID MONITORS				
5. CLOCKS				
6. EMERGENCY POWER EQUIPMENT				
7. EVACUATION PROCEDURES				
8. LOCAL GRID MAPS				
9. TACTICAL ALERT PROCEDURES				
10. RESPONSIBILITIES				
11. ASSOCIATED FOC/FCC				
A. LOCATION				
B. RELATIONSHIP				
12. SPECIAL CIRCUITS/DEVICES				
13. RADIO PROCEDURES				

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PART II OPERATIONAL KNOWLEDGE

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. FOC/FCC				
A. LOCATION				
B. MISSION				
C. AREA OF RESPONSIBILITY				
D. HAND OFF PROCEDURES				
E. HAND OFF POINTS/FIXES				
2. ALTITUDE RESTRICTIONS/RESPONSIBILITIES				
3. SPECIAL ATC PROCEDURES				
4. KNOW LOCATION OF				
A. VOR/VORTAC/TACAN/NDB/ILS				
B. FIXES				
(1) VFR REPORTING POINTS				
(2) RELEASE POINTS				
(3) HOLDING POINTS				
(4) SPECIAL ENTRY/EXIT POINTS				

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
5. DESCRIBE				
A. SECTOR AREA				
B. TRAFFIC BY TYPE				
C. AIRWAYS				
D. LOCATION OF AIRPORTS,				
HELIPORTS; TO INCLUDE TYPE				
ATC FACILITIES AVAILABLE				
E. RESTRICTED/PROHIBITED AIRSPACE				
F. DF NET CONTROL STATION LOCATIONS				
G. TACTICAL AREA OF OPERATIONS				

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PART III PERFORMANCE OF FLIGHT DATA

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. TAPE RECORDERS				
A. CHANGE, MARK AND FILE TAPES				
B. PLAYBACK				
C. QUALITY CHECKS				
D. REMOTE MONITORS				
E. FAILSAFE				
F. FILING				
G. RETENTION PERIOD				
2. FLIGHT PROGRESS STRIPS				
A. INBOUND/OUTBOUND				
(1) FORMAT				
(2) MARKING				
B. TACTICAL FLIGHT PLANS				
3. LOGS, FORMS, AND RECORDS				
4. CLOCKS/TIME CHECKS				
5. INTERPHONE SYSTEM				

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KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
6. INTERCOM				
7. TELEPHONES				
8. CONSOLE EQUIPMENT				
9. DF NET/COORDINATION				
10. COPY, RELAY AND				
IDENTIFY PRIORITY OF				
A. CLEARANCES				
B. WEATHER DATA				
C. NOTAMS				
D. REQUEST FOR INFORMATION				
FROM NON-ATC AGENCIES				
11. SPECIAL PROCEDURES				
A. ALERTING AGENCIES TO LOST OR				
OVERDUE AIRCRAFT				
B. VIP				
C. MED-EVAC				
D. TACTICAL ALERT NOTIFICATION				
E. ACCIDENT/INCIDENT PROCEDURES				
F. SEVERE WEATHER WARNING				
NOTIFICATION PROCEDURES				
G. IFF/SIF MODE/CODE ASSIGNMENTS				

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KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
12. FACILITY REFERENCE/INFORMATION				
FILES				
A. LETTERS OF AGREEMENT				
B. OPERATION LETTER				
C. FACILITY MEMORANDA				
D. FLIP				
E. OTHER				

DA FORM 3479-4R

PART IV PERFORMANCE OF ENROUTE FLIGHT FOLLOWING TASKS

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. FLIGHT PROGRESS STRIPS				
A. FORMAT				
B. MARKING				
2. LOGS, FORMS AND RECORDS				
3. PHRASEOLOGY				
4. NAVAID MONITORING				
5. FLIGHT FOLLOWING OF				
ENROUTE AIRCRAFT/HELICOPTER				
A. AREA OF OPERATION				
B. PREFERRED ROUTE/S				
C. RESTRICTED/PROBLEM AREAS				
D. ADVISORIES				
E. COORDINATION PROCEDURES				
F. SPECIAL REQUEST ENROUTE				
6. SPECIAL PROCEDURES				
A. HIJACK				
B. DANGEROUS CARGO				

DA FORM 3[illegible]-4R

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KNOWLEDGE AND TASKS	DATE STARTED	DATE COMPLETED	INITIALS TRAINEE	INITIALS TRAINER
C. BOMB THREAT				
D. TACTICAL PROCEDURES				
E. IFF/SIF MODE/CODE ASSIGNMENTS				
F. EMERGENCY ENROUTE PROCEDURES				
G. FLIGHT INSPECTION				
H. EXCEPTION TO STANDARD PROCEDURES				
I. OVERDUE PROCEDURES				
J. HANDOFF CONTROL				
TRANSFER PROCEDURES				
7. ADVISORIES				
A. TRAFFIC				
B. NOTAM/NAVAID OUTAGES				
C. WEATHER WARNINGS				
D. PARADROPS				
E. HIGH PERFORMANCE AIRCRAFT				
F. COMMUNICATIONS TRANSFER				
8. RELAY OF CLEARANCES				
9. FACILITY INFORMATION/				
REFERENCE FILE				
A. LETTERS OF AGREEMENT				
B. OPERATION LETTERS				

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KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
C. FACILITY MEMORANDUM				
D. FLIP				
E. OTHERS				

DA FORM 3479-4R

PART V RADAR EQUIPMENT

KNOWLEDGE AND TASKS	DATE		INITIALS	
	STARTED	COMPLETED	TRAINEE	TRAINER
1. RADAR, TO INCLUDE PRIMARY				
AND SECONDARY SYSTEMS				
A. CHARACTERISTICS				
(1) COVERAGE (INCLUDE BLIND				
AREAS/LIMITATIONS				
(2) RANGES				
(3) VIDEO MAPPING/OVERLAYS				
(4) CURSORS				
(5) ECM-ECCM				
2. ALINEMENT/ADJUSTMENT PROCEDURES				
A. CONTROLS/FEATURES USED B. REQUIRED/DESIRED DISPLAY				
C. ACCURACY D. LOCAL REQUIREMENTS				
3. SPECIAL CIRCUITS/DEVICES				
4. MINIMUM VECTORING ALTITUDE				
CHART INFORMATION (LOCAL)				
5. RADIO/LAND LINE COMMO SYSTEMS				
6. OTHER				

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APPENDIX K

AIR TRAFFIC CONTROL SUPERVISOR EVALUATION				DATE	
PERSONAL DATA					
NAME	GRADE	ATCS NO.		PMOS	DMOS
TYPE ATC FACILITY	POSITION EVALUATED FOR				
RATINGS					
	SAT	UNSAT		SAT	UNSAT
TECHNICAL COMPETENCE			ADAPTABILITY		
ADMINISTRATIVE ABILITY			ATTITUDE		
INSTRUCTIONAL ABILITY			INITIATIVE		
HANDLING ABNORMAL SITUATIONS			LEADERSHIP		
FORMS AND RECORDS			RESPONSIBILITY		
KNOWLEDGE OF FACILITY EQUIPMENT			DEPENDABILITY		
EQUIPMENT MAINTENANCE REQUIREMENTS			TACT		
FACILITY OPERATIONS PROCEDURES			MILITARY BEARING		
KNOWLEDGE OF FACILITY MISSION			RELATE WITH OTHERS		
DISPLAYED PROFESSIONALISM			PERSONAL CONDUCT		
MANDATORY QUALIFICATIONS					
CURRENT FACILITY RATING FOR TYPE FACILITY EVALUATED			YES	NO	OFFICIAL WAIVER
CURRENT CLASS II PHYSICAL			YES	NO	OFFICIAL WAIVER
INTEGRITY AND ABILITY TO BE FACILITY EXAMINER			YES	NO	
MOS TEST OR SQT SCORE			YES	NO	
EVALUATOR'S OVERALL RATING					
EVALUATOR'S COMMENTS					
EVALUATOR'S TYPED/PRINTED NAME AND GRADE			EVALUATOR'S SIGNATURE		

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COMMENTS OF EVALUATED PERSON	DATE
THE UNDERSIGNED AGREES DISAGREES (IF YOU DISAGREE WITH EVALUATION, REFER TO SPECIFIC ITEMS OF CONTENTION IN YOUR COMMENTS.)	
TYPED/PRINTED NAME, GRADE	SIGNATURE

REVIEWING AUTHORITY	DATE
COMMENTS THE UNDERSIGNED AGREES DISAGREES WITH THIS EVALUATION	
TYPED/PRINTED NAME, GRADE & TITLE	SIGNATURE

DA FORM 3479-5R 1 JUN 78 2

DATA REQUIRED BY THE PRIVACY ACT OF 1974
(5 U.S.C. 552a)

TITLE OF FORM	PRESCRIBING DIRECTIVE
DA Form 3479-R Series (See para 3 below)	FM 1-200

1 AUTHORITY

Title 10, USC, Section 3012 (Systems Notice 1111-16)

2 PRINCIPAL PURPOSE(S)

Information obtained on this series of forms will be used to maintain records and monitor training, proficiency, progress, certification, evaluations, and personnel status reports on air traffic control personnel.

3 ROUTINE USES

3479 R, Training and Proficiency Record - Air Traffic Controller.
Uses: To record training given to each individual within the facility.

3479-1R, Trainee/Controller Evaluation
Uses: To record trainee controller and controller proficiency checks/ qualification/evaluations at all controller positions.

3479-2R, Progress and Certification Record for Control Tower.
Uses: To be used as a training plan within towers and shall be filled out on each trainee as he completes a knowledge or task.

3479-3R, Progress and Certification Record for Terminal Radar (ARAC) (GCA).
Uses: To be used as a training plan within terminal radar facilities and shall be filled out on each trainee as he completes a knowledge or task.

3479-4R, Progress and Certification Record for Flight Operations and Flight Coordination Center (FOC) (FCC).
Uses: To be used as a training plan within FOC/FCC and shall be filled out on each trainee as he completes a knowledge or task.

3479-5R, Air Traffic Control Supervisor Evaluation.
Uses: To evaluate the proficiency of potential and assigned ATC supervisors.

3479-6R, ATC Facility Personnel Status Report.
Uses: To ensure accuracy of a centralized controller certification program as prescribed by FAA Order 7220.1A.

4 MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION

Disclosure is mandatory. Refusal will prevent certification and a rating to perform air traffic control duties as prescribed by AR 95-37 and FM 1-200.

DA FORM 3479-R Series Privacy Act Statement - 28 Sep 75

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By Order of the Secretary of the Army:

BERNARD W. ROGERS
General, United States Army
Chief of Staff

Official:

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Brigadier General, United States Army
The Adjutant General

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