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IN REPLY REFER TO

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OPNAV INSTRUCTION 3722.35

From: Chief of Naval Operations

Subj: BASELINE PLANNING CRITERIA FOR NAVAL AIR TRAFFIC CONTROL
FACILITY (ATCF) RESOURCES CRITERIA

Encl: (1) Baseline Planning Criteria

1. Purpose. To provide guidance in minimum baseline planning of naval ATC facilities by proper utility of resources available.

2. Background. Development of a classification scheme which describes the various types of existing Navy and Marine Corps ATCFs has been a goal of ATC system planners. Enclosure (1) provides a mechanism for defining ATCF resources logically and on an equitable basis that has been unsuccessful in the past.

3. Action. Commanding officers/officers in charge of the air traffic control facilities will use enclosure (1) as a basic source reference in minimum baseline planning.

R. P. ILG
R. P. ILG
By direction

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OPNAVINST 3722.35

21 SEP 1988

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21 SEP 1988

BASELINE PLANNING CRITERIA
FOR
NAVAL AIR TRAFFIC CONTROL FACILITY (ATCF) RESOURCES
(ASHORE)

1. ATCF Classification Standard. This document contains Baseline Planning Criteria designed to aid in identifying minimum Air Traffic Control (ATC) resource requirements for Naval ATCFs. It is not intended to replace existing directives that identify or regulate the outfitting of naval air activities. Rather, it concentrates on those specific resources necessary to provide ATC services while complementing other support equipment necessary to sustain activity air operations. The terms, Baseline Planning Criteria and Standards, as they appear in this document, should be viewed as interchangeable and not construed as a limitation to activity resource requirements. However, in those instances where deviations from baseline criteria resource allocations are required, those activities that are required to deviate must announce such deviations in a form such as an Operational Capability Improvement Request (OCIR) or similar media providing for command endorsements. Addressed within the standard are the needs for ATCF classification, the concepts used for standard development, descriptions of the resulting five ATCFs, and definitions of the resulting five ATCF classes.

2. Need For Classification. Development of a classification scheme which succinctly describes the various types of existing Navy and Marine Corps ATCFs has long been a goal of Navy ATC system planners. Such a scheme would provide a mechanism for defining ATCF resources logically and on an equitable basis systemwide. Previous attempts have been unsuccessful, usually resulting in too large a number of unique classes to be of planning value.

3. Approach To Standard Development

a. By definition, classification is the process of systematically arranging things into groups on the basis of common traits. The underlying principle for establishing a classification scheme is that each resultant class must encompass common elements. As Navy ATC is one of a large number of closely interrelated elements collectively supporting the Naval Aviation mission, the classification scheme must identify all elements that have a bearing on the performance of ATC and must analyze each element for commonality across the spectrum of ATCFs. Six major and eighteen minor categories were identified and analyzed for appropriateness. Major categories included air stations, airfield facilities, base loading, operating environment, ATC services, and flight activities. This process yielded a single common element, the ATC services provided; each other element has an impact on ATCF standardization objectives at a lesser level.

b. The ATCF classification scheme, by segregating ATC services into groups, established five major classes:

Enclosure (1)

21 SEP 1988

- (1) Class I - Flight Planning Facility.
- (2) Class II - Control Tower Facility.
- (3) Class III - Control Tower with GCA Facility.
- (4) Class IV - Approach Control Facility.
- (5) Class V - Joint Control Facility.

c. A second screening process to determine if further distinction within a class was possible or practical identified significant differences in the following three classes:

(1) Class III ATCFs can be further identified by GCA pattern control authority; i.e., with or without.

(2) Class IV ATCFs can be further identified by the method used to provide Terminal Area services; i.e., manual or radar assisted.

(3) Class V ATCFs can be further identified by the type of Range Control services provided; i.e., Research, Development, Test and Evaluation (RDT&E) or Training.

d. Results of these processes are shown below.

FIGURE 1
ATCF CLASSES, CATEGORIES AND SERVICES

ATCF CLASS AND CATEGORY		ATC SERVICES OFFERED				
		FLIGHT ASSISTANCE	AIRPORT TRAFFIC CONTROL	LOW APPROACH AND LANDING	TERMINAL AREA CONTROL	RANGE CONTROL (AIR)
I	FLIGHT PLANNING FACILITY	●				
II	CONTROL TOWER FACILITY	●	●			
III	CONTROL TOWER W/GCA FACILITY	●	●	●		
	A GCA - FINAL CONTROL B GCA - PATTERN CONTROL					
IV	APPROACH CONTROL FACILITY	●	●	○	●	
	A MANUAL B RADAR					
V	JOINT CONTROL FACILITY (JCF)	●	●	○	○	●
	A RDT&E B TRAINING					

● - REQUIRED
○ - OPTIONAL

4. ATC Service Descriptions. There are five distinct ATC Services provided singly or in combination at every AFTC. These are Flight Assistance Service, Airport Traffic Control Service, Low Approach and Landing Service, Terminal Area Service, and Range Control (Air) Service.

a. Flight Assistance Service. The planning of a flight is the first element of an air operation. Safety of flight is dependent upon thorough flight planning covering itinerary, times, and weather. The Flight Assistance Service interfaces the flight crew with the air traffic control system and encompasses work, space, personnel, equipment, and information related to:

- (1) Planning the flight.
- (2) Introducing the plan into the ATC system.
- (3) Providing flight safeguard.

b. Airport Traffic Control Service. Airport Traffic Control consists of those services provided to aircraft operating within the Airport Traffic Area or on the airport surface. These services are somewhat unique as they are the only services that are location sensitive; using today's technology, they require an elevated structure and visual contact. These services include:

(1) Issuing control instructions to provide sequencing and assure the orderly and expeditious movement of aircraft departing from, landing at, or approaching the airport for landing.

(2) Furnishing information to pilots concerning clearances to operate aircraft, weather and field conditions, and pertinent operating and procedural instructions.

(3) Relaying aircraft operation and control messages between pilots and other air traffic facilities.

(4) Notifying crash and rescue agencies during actual or potential accidents on or in the vicinity of the airport.

c. Low Approach And Landing Service. This Service permits aircraft to be recovered when weather ceilings and visibility are less than that prescribed for Instrument Approach Procedures (IAP) predicated on non-precision air navigational aids. Its services encompass:

(1) Issuing control instructions to provide separation to aircraft approaching for landing under marginal weather conditions.

(2) Providing control instructions and information to align aircraft in azimuth and altitude so an optimum touchdown point on the landing surface may be reached.

21 SEP 1988

d. Terminal Area Control Service. The Terminal Area Control Service provides separation and control of aircraft operating in the relatively dense air traffic environment surrounding major airports. Its tasks, which are exclusive of those performed as part of the Airport Traffic Control and Low Approach and Landing Services, encompass:

(1) Separation and control of departing and arriving aircraft operating under Instrument Flight Rules.

(2) Separation and control of transiting aircraft operating under Instrument Flight Rules.

(3) Separation and control of aircraft operating under Visual Flight Rules that want the added margin of safety afforded by such control.

e. Range Control (Air) Service. The Range Control (Air) Service combines both ATC in the classic sense, i.e., separating aircraft from each other or obstructions, and the provisions of combat direction and/or range surveillance. This mission-oriented Service encompasses:

(1) Mission aircraft flight-following.

(2) Mission aircraft direction.

(3) National Airspace System interface.

5. ATCF Class Definitions

a. Class I - Flight Planning Facility. This is an ATCF that is organized, manned, and equipped to provide Flight Assistance services to aircrews, including flight planning and flight safeguard services.

b. Class II - Control Tower. This ATCF is organized, manned, and equipped to provide Airport Traffic Control services, including air traffic sequencing to aircraft airborne within the airport traffic area; authority for aircraft to land or take off from runways, sea lanes, or heliports; and control of aircraft and vehicles on the surface within the movement area to ensure safe, orderly, and expeditious aircraft movement. Unless modified by Letter of Agreement, the Air Traffic Control Clearance Authority vested in the tower is limited to that permitted for operation in accordance with Visual Flight Rules (VFR); however, Instrument Flight Rules (IFR) or Special VFR Air Traffic Control clearances, originated by other facilities having such authority, may be relayed by the tower. Flight Assistance services also are provided.

c. Class IIIA/IIIB - Control Tower/Ground Controlled Approach (GCA) Facility. This ATCF is organized, manned, and equipped to provide Airport Traffic Control and Low Approach and Landing services, including air traffic sequencing to aircraft airborne within the airport traffic area; authority for aircraft to land or take off from runways, sea lanes, or heliports; control of

aircraft and vehicles on the surface within the movement area; and control instructions to aircraft during the Intermediate and Final Approach segments (Class IIIA) to ensure safe, orderly, and expeditious aircraft movement. Unless modified by Letter of Agreement, the Air Traffic Control Clearance Authority vested in the tower is limited to that permitted for operation in accordance with Visual Flight Rules (VFR); however, Instrument Flight Rules (IFR) or Special VFR Air Traffic Control clearances, originated by other facilities having such authority, may be relayed or issued. In like manner, GCA control authority may be extended beyond the Intermediate fix when authorized by Letter of Agreement (Class IIIB). Flight Assistance services also are provided.

d. Class IVA/IVB - Approach Control Facility. This ATCF is organized, manned, and equipped to provide Airport Traffic Control and Terminal Area services, including separation and control to arriving, departing, and, occasionally, enroute aircraft operating in accordance with Instrument Flight Rules (IFR) and, when appropriate, Visual Flight Rules (VFR) within airspace assigned for the purpose by Letter of Agreement, to ensure safe, orderly, and expeditious aircraft movement. Services to the primary airport include air traffic sequencing to airborne aircraft within the airport traffic area; authority for aircraft to land or take off from runways, sea lanes, or heliports; and control of aircraft and vehicles on the surface within the movement area. These facilities are authorized to originate IFR and Special VFR Air Traffic Control Clearances for aircraft landing at or departing from airports within their assigned area of responsibility or transiting airspace under their control jurisdiction, including instrument approach and departure clearances. Class IVB facilities are radar-capable and employ radar procedures, whereas Class IVA facilities do not. Either also may provide Low Approach and Landing services. Flight Assistance services also are provided.

e. Class VA/VB - Joint Control Facility. This is a combined ATCF and Range Operations Center (ROC) that is organized, manned, and equipped to provide Class II, IIIA/B, or IVA/B ATC services and Range Control services. Facilities located at a Research, Development, Test and Evaluation (RDT&E) activity, are classified as VA; those at training activities, as VB. In both cases, ROC services may include aircraft control, separation, positioning, tracking, and target scoring. ROC operational jurisdiction is typically limited to Special Use Airspace (Restricted Areas, Military Operating Areas (MOA), or ATC Assigned Airspace (ATCAA)).

6. Operating Position Quantity Standard

a. This standard supports determination of the number of Operating Positions needed to provide Air Traffic Control services at all ATCFs, regardless of class. It is recognized that currently some installations do not conform to the provisions of this standard. It is not intended that facility modifications be accomplished solely for the purpose of conformance. Rather, the standard should be used as the definitive basis for determining requirements

21 SEP 1988

when establishing new ATCFs or planning modifications at existing facilities where the magnitude of the work justifies realignment expenditures.

b. This standard addresses the need for Operating Position standardization, explains the functions performed by each Operating Position, and establishes the criteria to be used for determining types and quantities of Operating Positions.

7. Need For Operating Position Standardization

a. Operating Position types and quantity have a significant impact on the resources necessary to provide ATC services. Observations at a large percentage of existing ATCFs show considerable variation among facilities with similar operational characteristics. In a number of instances, it can be shown that requirements determination has been based upon a local perception of "what is best" in the absence of definitive guidance from higher authority. This practice has resulted in successive Operating Position modifications and relocations as changing personnel reevaluate requirements based upon a different perception of "best."

b. Baseline criteria, which satisfy requirements at the local operational level yet meet system standardization goals, will increase standardization, shorten on-the-job training, and reduce costs. Consistent with a work-resource philosophy, such criteria are based on services provided and functions performed.

8. Operating Position Description. Work performed in each ATC Service is grouped to closely parallel pilot requirements to operate safely throughout flight. For example, before departure, a pilot must safely taxi from the parking area to the takeoff area, therefore the ATCF function is to provide assistance so that potentially hazardous situations can be avoided. Because control of taxiing aircraft is repetitious, associated tasks can be grouped, in today's environment, at the Ground Control position. Similar patterns of work groupings occur throughout each ATC Service. Five Services that exist in the Terminal ATC environment are Flight Assistance, Airport Traffic Control, Low Approach and Landing, Terminal Area Control, and Range Control (Air). Each is described below in terms of the work associated with its Operating Positions.

a. Flight Assistance Service. Flight Dispatcher is the only position type included in this Service. The associated work covers introduction of flight plans into the ATC system and flight safeguard. Tasks performed include receipt, posting, and forwarding of appropriate flight plan information and maintenance of a continuous record of all flights to ensure prompt initiation of overdue or missing aircraft procedures. At most air stations, non-ATC related tasks are assigned and are included within the Flight Assistance Service. These include such things as transporting transient aircrews, processing flight ration requests, or spot checking the airport movement area for

hazards. Although these tasks exist and must be performed, their variety and unstructured nature excludes them from any defined relationship within the Service.

b. Airport Traffic Control Service. Work is distributed across the following five position types: Flight Data (Tower), Clearance Delivery, Ground Control, Local Control, and Coordinator/Supervisor (Tower).

(1) Flight data (tower) position work includes receiving and recording of flight plan messages, IFR ATC clearances, airport and ATC equipment condition messages, and weather messages; forwarding of such information; and maintaining air operations statistics.

(2) Clearance delivery position work is the action required in forwarding IFR ATC departure clearances to pilots.

(3) Ground control position work involves both aircraft and vehicles and includes providing advice, information, and instructions to taxiing aircraft and vehicles on the airport movement area (exclusive of active landing and departure areas); coordinating such movements as required; and alerting crash/rescue agencies when necessary.

(4) Local control position work includes providing information, advice, instructions, and clearances to separate and sequence airborne aircraft and to direct aircraft and vehicles operating on active landing and departure areas as well as operating field and approach lighting systems.

(5) Coordinator/supervisor (tower) work ensures the safety and operational efficiency of Airport Traffic Control services during a watch period. This includes managing the work force; ensuring work force compliance with operational rules, procedures, and standards; and accepting ATC equipment for operational use.

c. Low Approach and Landing Service. Work is distributed across the following five position types: Flight Data (GCA), Final Control (PAR), Final Control (ACLS), Arrival Control (GCA), and Coordinator/Supervisor (GCA).

(1) Flight data (GCA) position work includes receipt, recording, and forwarding of information on aircraft movement, weather, and equipment status; coordination of aircraft movements between Services and other ATCFs; and assignment of aircraft to the Final Control work force.

(2) Final control (PAR) position work includes issuing instructions, advice, information, and clearances to pilots to maintain separation between aircraft and obstructions and issuing instructions, advice, information, and clearances to pilots to arrive at a point where visual approach to a landing may be accomplished.

21 SEP 1988

(3) Final control (ACLS) position work includes operating the ACLS console for Modes I, IA, and II automatic approaches, issuing instructions, information, and clearances to pilots to maintain separation between aircraft and obstructions; and issuing instructions, advice, information, and clearances to pilots during Mode III non-automatic approaches so as to arrive at a point where visual approach to a landing may be accomplished.

(4) Arrival control (GCA) position work includes issuing instructions, advice, information, and clearances to pilots to maintain separation between aircraft and obstructions and issuing instructions, advice, information, and clearances to pilots to arrive at a final approach descent point.

(5) Coordinator/supervisor (GCA) position work is that necessary to ensure the safety and operational efficiency of Low Approach and Landing services during a watch period. This includes managing the work force; ensuring work force compliance with operational rules, procedures, and standards; and accepting ATC equipment for operational use.

d. Terminal Area Control Service. This Service may be provided by either of two methods; i.e., manual (non-radar) or radar assisted. In both cases, position work is identical and distributed across the following four position types: Flight Data (non-radar/radar), Approach Control (non-radar/ radar), Departure Control (non-radar/radar), and Coordinator/Supervisor (non-radar/radar).

(1) Flight data (non-radar/radar) work includes receiving and recording flight plan and ATC Clearance messages as well as information on aircraft movement, weather, and equipment status; forwarding of such information; and maintaining air operations statistics.

(2) Approach control (non-radar/radar) work includes issuing instructions, advice, information, and clearances to pilots to maintain separation between aircraft and obstructions; issuing instructions, advice, information, and clearances to pilots to arrive at a point in space where an instrument or visual approach can commence; coordinating aircraft movements among the ATC Services or between the Services and other ATCFs; formulating, issuing, or forwarding for issue Special Visual Flight Rule arrival or overflight clearances; and formulating and forwarding instrument approach clearances.

(3) Departure control (non-radar/radar) work includes issuing instructions, advice, and clearances to pilots to maintain separation between aircraft and obstructions; issuing instructions, advice, information, and clearances to pilots to arrive at a point in space where transition to enroute flight may be commenced; coordinating aircraft movements among the ATC Services or between the Services and other ATCFs; formulating, issuing, or forwarding for issue Special Visual Flight Rule Departure Clearances; and formulating and forwarding Instrument Flight Rule departure (climbout) instructions.

21 SEP 1988

(4) Coordinator/supervisor (non-radar/radar) work consists of those actions necessary to ensure the safety and operational efficiency of Terminal Area Control services during a watch period. These actions include managing the work force; ensuring work force compliance with operational rules, procedures, and standards; and accepting ATC equipment for operational use.

e. Range Control (Air) Service. Position work is distributed across the following five position types: Flight Data (Air Range), Mission Control (Air Range), Area Control (Air Range), Coordinator/Supervisor (Air Range), and Project Control.

(1) Flight data (air range) work includes receiving and recording of aircraft movement messages, ATC clearances, weather, and equipment status information; forwarding of such information; and maintaining operational statistics.

(2) Mission control (air range) work includes issuing instructions, advice, and information to position aircraft at or relative to a predetermined, fixed point in space; issuing instructions, advice, and information to position aircraft relative to a moving point in space; issuing instructions, advice, and information to pilots to maintain separation between aircraft and obstructions; and coordinating aircraft movements among the ATC Services or between the Services and other ATCFs.

(3) Area Control (air range) work includes issuing instructions, advice, and information to pilots to preclude egress boundary violations (spill-out); observing airspace boundaries to identify potential ingress boundary violations (spill-in); and coordinating aircraft movements among the ATC Services and between the Services and other ATCFs.

(4) Coordinator/supervisor (air range) work is that necessary to ensure the safety and operational efficiency of Range Control (Air) services during a watch period. This work includes managing the work force; ensuring work force compliance with operational rules, procedures, and standards; and accepting ATC equipment for operational use.

(5) Project control is a position that essentially functions as a specialized Local Control position at selected ATCFs. Work includes providing information, advice, instructions, and clearances to separate and sequence airborne project aircraft from other project aircraft and/or other airborne traffic landing at or departing from the airport.

9. Approach to Standard Development

a. The requirement for different Operating Positions results from the need to perform different groups of ATC functions efficiently and in order. Efficient handling of aircraft by an ATCF is achieved by the involved Operating Positions accomplishing assigned work functions in a time-ordered sequence.

21 SEP 1988

ATC function sequences are directly aligned with a mandatory series of flight-associated pilot events. Efficiency is enhanced by reducing or eliminating delay in processing aircraft within or between Operating Positions. The optimum function sequence for any Operating Position is, therefore, the one in which processing delay is minimal.

b. Determination of Operating Position quantities is based on analysis of the following interrelated elements:

(1) Function occurrence rate (or the rate at which ATC functions occur) measures the number of times key sets of functions occur per unit time.

(2) Function space (or the amount of air or ground space under the control jurisdiction of an Operating Position), as used in this consideration, describes either space of finite dimensions, such as GCA final approach course length and the like or generic space, such as Approach Control sectors, air port movement area, and the like.

(3) Work function accomplishment rate (or the rate at which a trained individual can safely and efficiently accomplish position work) is a measure of the ability of an operator to accomplish position related functions per unit time.

c. To avoid imposing an extensive data collection burden on facilities, constant value rates, based on experience, were used in developing this standard.

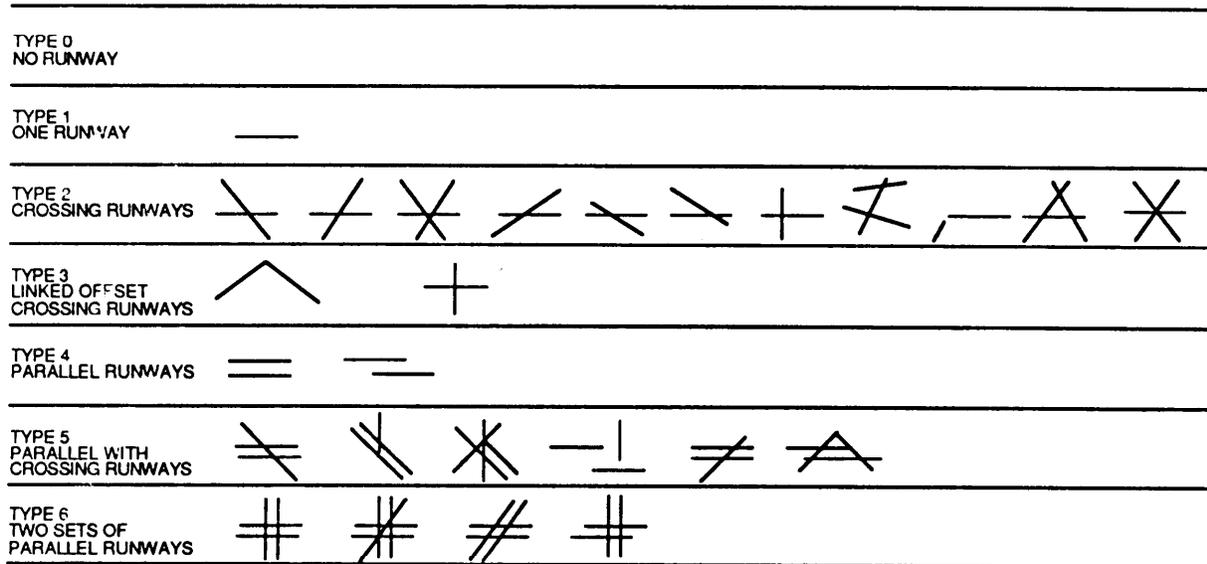
10. Operating Position Requirements

a. Flight Assistance Service. In other operating positions, an increase in the Function Occurrence Rate indicates the need to add both equipment and personnel positions. For the Flight Dispatcher position, only persons need be added because addition of equipment does not alter the rate at which flight plans can be forwarded. All ATCFs shall therefore contain one Flight Dispatcher position.

b. Airport Traffic Control Service. The Function Occurrence Rate for determining Airport Traffic Control Service positions is an Equivalent VFR Flow Rate (EVFR) of two operations per minute per person. EVFR normalizes controller IFR functions to the same baseline as controller VFR functions. In addition, the number and type of Operational Positions is affected by Function Space; i.e., the airport configuration (see Figure 2). EVFR is obtained from line 7, Worksheet C, as shown in Figure 3.

(1) In the interest of standardization and to accommodate a rapid operational expansion contingency, e.g., a major increase in traffic volume occasioned by a sudden increase in base loading, all facilities regardless of class shall include one Flight Data position, one Clearance Delivery position, one Ground Control position, and one Local Control position.

FIGURE 2
USN/USMC RUNWAY CONFIGURATIONS



(2) When the airport configuration is Type 4, 5, or 6, and tower placement does not permit simultaneous observation of taxiway traffic to or from both parallel runways, add one Ground Control position.

(3) When the airport configuration is Type 4, 5, or 6, and tower placement does not permit simultaneous observation of the traffic pattern to both parallel runways from one position, add one Local Control position.

(4) When the actual or projected Equivalent VFR Flow Rate exceeds 105 operations per hour, add one Supervisor position.

c. Low Approach and Landing Service. The number of Final Control (PAR) positions is limited by the length of the final approach course as influenced by aircraft separation standards. Currently, available equipment limits the final approach course to approximately 12 miles. Application of the minimum IFR separation standard of three miles between aircraft means that no more than four aircraft can be on final to the same runway simultaneously. No distinction is made between IFR and VFR aircraft because, in practice, minimum IFR separation is typically applied to all aircraft making GCA approaches.

(1) Regardless of class, all facilities providing Low Approach and Landing services shall include not less than two Final Control (PAR) positions for each runway simultaneously served and one Flight Data (GCA) position.

FIGURE 3
EVFR CALCULATION WORKSHEETS

TOTAL OPERATIONS* USN/USMC			
MULTI-SHIFT FACILITIES		SINGLE SHIFT FACILITIES	
1	ENTER TOTAL ANNUAL OPERATIONS		
2	MULTIPLY LINE 1 BY 4.1	A	
3	MULTIPLY LINE 1 BY 2.4	B	
IFR OPERATIONS			
MULTI-SHIFT FACILITIES		SINGLE SHIFT FACILITIES	
1	ENTER ANNUAL IFR OPERATIONS		
2	MULTIPLY LINE 1 BY 4.1	C	
3	MULTIPLY LINE 1 BY 2.4	D	

* STATE IN THOUSANDS TO ONE DECIMAL, E.G., 180.494 = 180.5

WORKSHEET A

TOTAL OPERATIONS* USNR			
MULTI-SHIFT FACILITIES		SINGLE SHIFT FACILITIES	
1	ENTER TOTAL ANNUAL OPERATIONS		
2	MULTIPLY LINE 1 BY 6.8	A	
3	MULTIPLY LINE 1 BY 4.0	B	
IFR OPERATIONS			
MULTI-SHIFT FACILITIES		SINGLE SHIFT FACILITIES	
1	ENTER ANNUAL IFR OPERATIONS		
2	MULTIPLY LINE 1 BY 6.8	C	
3	MULTIPLY LINE 1 BY 4.0	D	

* STATE IN THOUSANDS TO ONE DECIMAL, E.G., 180.494 = 180.5

WORKSHEET B

1	ENTER DAILY AIRPORT TRAFFIC CONTROL SERVICE (TOWER) HOURS OF OPERATION			
2	ENTER STANDARD SHIFT DURATION FROM TABLE 1	DAY	EVE	MID
3	ENTER TOTAL OPERATIONS VALUE FROM WORKSHEET A OR B (AS APPROPRIATE)	A	B	
4	ENTER IFR OPERATIONS VALUE FROM WORKSHEET A OR B (AS APPROPRIATE)	C	D	
5	MULTIPLY LINE 4 BY 1.25			
6	SUM LINE 5 AND LINE 3 TO DETERMINE EQUIVALENT VFR OPERATIONS			
7	DIVIDE LINE 6 BY LINE 2 TO DETERMINE EVFR RATE PER MONTH			

WORKSHEET C

STANDARD SHIFT

DAILY OPERATING HOURS	STANDARD SHIFT DURATION		
	DAY	EVE	MID
1	1		
2	2		
3	3		
4	4		
5	5		
6	6		
7	7		
8	8		
9	9		
10	10		
11	6	5	
12	7	5	
13	8	5	
14	8	6	
15	8	7	
16	8	8	
17	9	8	
18	9	9	
19	10	9	
20	10	10	
21	8	8	5
22	8	8	6
23	8	8	7
24	8	8	8

TABLE 1

(2) When actual or projected operations rate per shift for each runway simultaneously served is greater than 109, add one PAR/ASR Final Control position.

(3) When actual or projected operations rate per shift for each runway simultaneously served is greater than 171, add one Final Control (PAR) position.

(4) When an ACLS capability is required, add two Final Control (ACLS) positions.

(5) In addition, all Class IIIB and IVB facilities and those Class IVA facilities providing Low Approach and Landing services shall contain one Arrival Control position for each runway simultaneously served.

(6) When the sum of all Low Approach and Landing Service positions equals or exceeds five, add one Coordinator/ Supervisor (GCA) position.

d. Terminal Area Control Service. Parameters used to determine Terminal Area Control Service positions are aircraft flow rate per hour per sector and the number of airspace sectors established by the facility. Sectors are determined by the number and location of satellite airports and the runway configuration at the primary airport. Sector quantity and arrangement are determined at the local level because only the local ATCF is sufficiently knowledgeable about prevailing ATC complexities.

(1) All Class IVA or IVB ATCFs shall include one Flight Data (non-radar/radar) position.

(2) Each Departure Control Sector shall contain one Departure Control (non-radar/radar) position.

(3) When the sector departure traffic flow rate exceeds 16 but is less than 25 aircraft per hour, add one Assistant Departure Control (non-radar/radar) position.

(4) When the sector departure traffic flow rate equals or exceeds 25 aircraft per hour, add one Departure Control (non-radar/radar) position.

(5) Each Approach Control sector shall contain one Approach Control (non-radar/radar) position.

(6) When the sector approach traffic flow rate exceeds 15 but is less than 20 aircraft per hour, add one Assistant Approach Control (non-radar/radar) position.

(7) When the approach traffic sector flow rate equals or exceeds 20 aircraft per hour, add one Approach Control (non-radar/radar) position.

21 SEP 1988

(8) When the sum of Departure, Approach, Arrival and Final Control positions is five or more, add one Supervisor/ Coordinator (non-radar/radar) position.

e. Range Control (Air) Service

(1) The unique and relatively unstructured nature of the missions performed by ATCFs that incorporate Range Control (Air) services precludes development of definitive Operating Position quantity criteria. An individual staff study of requirements should be conducted at each facility where major changes are requested. Requesting agencies shall provide detailed background and a rationale to justify all required positions.

(2) Normally, each facility should contain one Flight Data (Air Range), one Coordinator/Supervisor (Air Range), and one Project Control position. Mission Control (Air Range) and Area Control (Air Range) position quantities will generally be determined on the basis of airspace sectoring; however, sector traffic flow rates may be considerably less than those prescribed for the Terminal Area Control Service due to the special nature of the facility mission.

11. Operating Position Equipment Standard

a. The Operating Position Equipment Standard supports determination of the type and quantity of equipment required to provide Air Traffic Control services, regardless of class. The standard is designed to assist equipment planners by providing a set of Operating Position generic equipment requirements for each class and the mechanism for translating generic requirements to nomenclatured equipment. It is recognized that some installations do not currently conform to the provisions of this standard. It is not intended that modifications be accomplished solely for the purpose of conformity. Rather, the standard should be used as the definitive basis for determining requirements for new ATCFs or when planning modifications at existing facilities where the magnitude of the work justifies the cost of incorporating the provisions of the standard.

b. The standard addresses the need for Operating Position equipment standardization, explains the basis for determining position equipment requirements, and presents sets of generic equipment standards tailored to ATCF class.

12. Need for Equipment Standardization

a. Civil Air Traffic Control has evolved largely as a result of advances in electronic and aircraft design technology. As new technology permitted increased aircraft capabilities, newer, more capable equipment has been incorporated into ATCFs. Parallel advances continue today as automation enters the aviation environment. Navy ATC, as part of the common National Airspace

System, has followed the civil lead in incorporating new technology but, historically, has lagged behind the FAA by several years.

b. In the past, Navy planners have been able to accommodate changing equipment needs on a case-by-case basis without a compelling need for documented equipment standards; i.e., requirements could be satisfied through redundancy. For example, if a communications capability was required, the planner could provide identical systems at reasonable cost to all positions requiring the capability. However, as equipment costs have increased and as automated equipment enters the Navy inventory, this practice ceases to be economically viable; a more definitive planning basis is required.

13. Approach to Standard Development

a. ATC equipment is an extension of the human faculties -- memory, sight, hearing, and speech. Equipment helps the controller to collect, sort, and judge facts; to formulate decisions based on these facts; and to communicate decisions in various forms to pilots and other controllers. All ATC equipment is designed to assist the controller in accomplishing the work associated with an ATC Service and its Operating Positions. Equipment provides information, records information, aids in processing information, and allows information to be communicated.

b. Equipment improvement planning, whether for a new or upgraded facility capability, must be based upon operational requirements. In the case of ATC, these requirements correspond to the equipment necessary at each Operating Position that allows controllers to accomplish position work. All other equipment necessary to achieve a position capability is derived from this source. Thus, a position communications requirement would indicate a need for a transmitter, receiver, antenna, and a recording capability as well as other equipment required to establish communications at the position.

c. During the requirements definition stage, planning broadly defines the functions a piece of equipment is expected to satisfy in operational terms; technical requirements, such as frequency, power out, and the like, are based on operational requirements. A specific piece of equipment is then matched to both. Within this context, the ATCF equipment planner must answer three fundamental questions:

(1) Based on operational parameters, what type of equipment is necessary to satisfy ATC service requirements at this ATCF?

(2) Based on technical parameters, what equipment will satisfy the operational parameters?

(3) How many pieces of equipment must be provided?

The first question is answered by analyzing the work necessary to provide various services. The response to the second question depends on resolution of

21 SEP 1988

the first because operational parameters drive technical parameters. The third requires two inputs -- the amount of equipment required to conduct daily operations and the quantity of spares necessary to support that equipment.

d. A "thread diagram" technique is used to determine Operating Position equipment requirements. This approach analyzes and documents the work of each position in terms of functions performed, interfaces required, and other factors that influence its accomplishment. Each major ATC evolution is plotted against all involved Operating Positions, and a determination is made concerning the equipment required by a controller to satisfy the evolution. At this stage, controller equipment is expressed in generic terms to avoid limiting results to current equipment inventories. As equipment does not alter the functions to be performed, the interfaces, and the factors influencing performance, the resulting standards remain valid regardless of equipment changes. Five generic categories of equipment identified in this manner are Communications, Aircraft Control Displays, Information Displays, Documentation Equipment, and Navigation Equipment. Each category contains additional subcategories identified by its operational purpose and function.

(1) Communications. Communications are employed by virtually all positions. In the standards, the Communications category is presented according to the following operational purposes:

(a) Aircraft control communications, which are used by controllers to forward to and receive from pilots operational information concerning aircraft movement and safety and which include issuing ATC clearances, providing advice, issuing commands, relaying weather information, etc.

(b) Vehicle control communications, which are used by controllers to forward and receive operational information concerning vehicle movement on the aircraft operating area and which include issuing clearances to enter the area or cross a runway, determining vehicle position or intentions, etc.

(c) Inter-facility coordination communications, which are used by controllers to forward and receive operational information between ATCFs concerning aircraft movement and safety and which include relaying ATC clearances, executing handoffs, relaying flight plan information, and the like.

(d) Intra-facility coordination communications, which are used by controllers to forward and receive operational and administrative information between operating positions within the ATCF and which include aircraft movement and safety messages (e.g., aircraft departure release authorizations, handoffs between positions) and administrative messages (e.g., aircraft parking, crew berthing and messing).

(2) Aircraft control displays. This category includes the displays used to locate and/or identify aircraft and those used to determine an

aircraft's position relative to a predetermined point-in-space to provide precise aircraft guidance. These are expressed in the standards by the following operational purposes and functions:

- (a) Aircraft Location.
- (b) Aircraft Identification.
- (c) Aircraft Positioning.

(3) Information sources. This category includes the displays used to determine environmental information for relay to pilots. These are expressed in the standards by the following operational purposes and functions:

- (a) Barometric Pressure Displays.
- (b) Time Displays.
- (c) Wind Speed and Direction Displays.
- (d) Weather Displays.

(4) Documentation equipment. This category presently is limited to equipment necessary to record and display flight progress information. These are expressed in the standards by the following operational purposes and functions:

- (a) Flight Progress Record.
- (b) Flight Progress Display.

(5) Navigation equipment. A generic standard for navigation equipment is not provided as aircraft navigation requirements are determined on a different basis.

14. Application of the Standard

a. Operating Position Equipment Standards are presented as a set of generic equipment requirements for each ATCF class (see Attachments A through G). All generic requirements sets are identical in terms of the equipment categories included; however, each is tailored to reflect the position work of the particular ATCF class.

b. In practice, the generic equipment required at each Operating Position is extracted from the appropriate requirements set. For each generic requirement, the equipment or equipment system that best fulfills the operational needs of the position is selected, and each generic equipment category is considered individually. The sum of these requirements is then reviewed to determine the most efficient and economical combination.

**ATCF EQUIPMENT STANDARD
 CLASS I**

**PURPOSE: AIRCRAFT CONTROL
 FUNCTION: DISPLAYS**

	AIRCRAFT LOCATION	AIRCRAFT IDENTIFICATION	AIRCRAFT POSITIONING
FLIGHT DISPATCHER (DP)			
FLIGHT DATA (TOWER) (FB(T))			
CLEARANCE DELIVERY (CB)			
GROUND CONTROL (GC)			
LOCAL CONTROL (LC)			
PROJECT CONTROL (PC)			
COORDINATOR/SUPERVISOR (TOWER) (CS(T))			
FLIGHT DATA (GCA) (FC(D))			
FINAL CONTROL (PAN) (FC(P))			
FINAL CONTROL (ACTS) (FC(S))			
ARRIVAL CONTROL (GCA) (ARR(S))			
COORDINATOR/SUPERVISOR (GCA) (CS(G))			
FLIGHT DATA (NON-RADAR) (FB(N))			
APPROACH CONTROL (NON-RADAR) (AC(N))			
DEPARTURE CONTROL (NON-RADAR) (BC(N))			
COORDINATOR/SUPERVISOR (NON-RADAR) (CS(N))			
FLIGHT DATA (RADAR) (FB(R))			
APPROACH CONTROL (RADAR) (AC(R))			
DEPARTURE CONTROL (RADAR) (BC(R))			
ARRIVAL CONTROL (RADAR) (ARR(R))			
COORDINATOR/SUPERVISOR (RADAR) (CS(R))			
FLIGHT DATA (IAM RANGE) (FB(A))			
MISSION CONTROL (IAM RANGE) (MC(IAM))			
AREA CONTROL (IAM RANGE) (AC(IAM))			
COORDINATOR/SUPERVISOR (IAM RANGE) (CS(IAM))			

NO REQUIREMENT

OPNAVINST 3722.35
21 SEP 1988

Class I Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS I

PURPOSE: INFORMATION SOURCES

FUNCTION: DISPLAYS

	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	BC (NON-RADAR)	COORDINATOR/SUPERVISOR (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AM RANGE)	MISSION CONTROL (AM RANGE)	MCA (AM RANGE)	AREA CONTROL (AM RANGE)	COORDINATOR/SUPERVISOR (AM RANGE)	
WEATHER	●																											
WINDSPEED AND DIRECTION	●																											
TIME	●																											
BAROMETRIC PRESSURE	●																											

KEY: ● REQUIRED

**ATCF EQUIPMENT STANDARD
 CLASS I**

PURPOSE: FLIGHT PROGRESS DOCUMENTATION

FUNCTION: RECORD/DISPLAY

	FLIGHT DATA DISPATCHER	FLIGHT PROGRESS RECORD	FLIGHT PROGRESS DISPLAY
FLIGHT DATA (TOWER) (FD(T))	●	●	
CLEARANCE DELIVERY (CD)			
GROUND CONTROL (GC)			
LOCAL CONTROL (LC)			
PROJECT CONTROL (PC)			
COORDINATOR/SUPERVISOR (TOWER) (CST)			
FLIGHT DATA (GCA) (FD(G))			
FINAL CONTROL (FAN) (FC(P))			
FINAL CONTROL (FACTS) (FC(S))			
ARRIVAL CONTROL (GCA) (AR(G))			
COORDINATOR/SUPERVISOR (GCA) (CS(G))			
FLIGHT DATA (NON-RADAR) (FD(N))			
APPROACH CONTROL (NON-RADAR) (AC(N))			
DEPARTURE CONTROL (NON-RADAR) (DC(N))			
COORDINATOR/SUPERVISOR (NON-RADAR) (CS(N))			
FLIGHT DATA (RADAR) (FD(R))			
APPROACH CONTROL (RADAR) (AC(R))			
DEPARTURE CONTROL (RADAR) (DC(R))			
ARRIVAL CONTROL (RADAR) (AR(R))			
COORDINATOR/SUPERVISOR (RADAR) (CS(R))			
FLIGHT DATA (AIR RANGE) (FD(A))			
MISSION CONTROL (AIR RANGE) (MC(A))			
AREA CONTROL (AIR RANGE) (AC(A))			
COORDINATOR/SUPERVISOR (AIR RANGE) (CS(A))			

KEY: ● REQUIRED

Enclosure (1)
 ATTACHMENT A

Class II Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS II

PURPOSE: AIRCRAFT CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF			
Flight Dispatcher	x						x	x	Ship-to-Shore	Master ATCOM Facilities only
Flight Data (Tower)										No Requirement
Clearance Delivery	x			x				x	Clearance Delivery	
Clearance Delivery	x				x			x	Clearance Delivery	
Ground Control	x			x				x	Ground Control	
Ground Control	x				x			x	Ground Control	
Ground Control	x			x				x	ATIS	
Local Control	x			x				x	Tower Primary	
Local Control		x		x				x	Tower Primary	
Local Control			x	x				x	Tower Primary	
Local Control	x				x			x	Tower Primary	
Local Control		x			x			x	Tower Primary	
Local Control			x	x				x	Tower Primary	
Local Control	x			x				x	ISO Primary	Facilities supporting FCLP requirements
Local Control	x			x				x	Emergency (243.0)	

**ATCF COMMUNICATIONS STANDARD
 CLASS II**

PURPOSE: AIRCRAFT CONTROL -Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UNF (AM)	VHF (AM)	VHF (FM)	HF				
Local Control		x		x				x	x	Emergency (243.0)	
Local Control			x	x				x	x	Emergency (243.0)	
Local Control	x				x			x	x	Emergency (121.5)	
Local Control		x			x			x	x	Emergency (121.5)	
Local Control			x		x			x	x	Emergency (121.5)	
Local Control	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirement
Coordinator/Supervisor (Tower)	x			x				x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x				x			x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x			x				x	x	Ground Control	
Coordinator/Supervisor (Tower)	x				x			x	x	Ground Control	
Coordinator/Supervisor (Tower)	x			x				x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x				x			x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x			x				x	x	LSO Primary	Facilities supporting FCLP requirements
Coordinator/Supervisor (Tower)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (Tower)	x							x	x	Emergency (121.5)	

Class II Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS II**

PURPOSE: VEHICLE CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	GHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher											No Requirement
Flight Data (Tower)											↓
Clearance Delivery											↓
Ground Control	x				x			x	x	Aircraft Emergency	
Ground Control	x				x			x	x	Fire Emergency	
Ground Control	x				x			x	x	Security	If airport access required by local directive
Ground Control	x				x			x	x	Crew Vehicles	↓
Local Control											No Requirement
Coordinator/Supervisor (Tower)	x					x		x	x	Aircraft Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Fire Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Security	If airport access required by local directive
Coordinator/Supervisor (Tower)	x					x		x	x	Crew Vehicles	↓

21 SEP 1988

Class II Equipment Standards

ATCF COMMUNICATIONS STANDARD
ATCF CLASS II

PURPOSE: INTRA-FACILITY COORDINATION
FUNCTION: INTERIOR LINKS

	DP	FB(T)	CB	CC	LC	PC	CS(T)	FB(G)	FC(P)	FC(B)	AR(B)	CS(I)	FB(N)	AC(N)	BC(N)	CS(N)	FB(R)	AC(R)	BC(R)	AR(R)	CS(R)	FB(A)	MC(A)	RC(A)	CS(A)	WX	TL	AT
	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (RDR-RABAR)	APPROACH CONTROL (RDR-RABAR)	DEPARTURE CONTROL (RDR-RABAR)	COORDINATOR/SUPERVISOR (RDR-RABAR)	FLIGHT DATA (RABAR)	APPROACH CONTROL (RABAR)	DEPARTURE CONTROL (RABAR)	ARRIVAL CONTROL (RABAR)	COORDINATOR/SUPERVISOR (RABAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	WEATHER SERVICE	TRANSIENT LINE	AIR TERMINAL
FLIGHT DISPATCHER	DP	•					•																			•	•	1
FLIGHT DATA (TOWER)	FB(T)	•	•	•	•		•																			•	•	1
CLEARANCE DELIVERY	CB	•					•																					
GROUND CONTROL	GC	•					•																					
LOCAL CONTROL	LC	•	•	•			•																					
PROJECT CONTROL	PC																											
COORDINATOR/SUPERVISOR (TOWER)	CS(T)	•	•	•	•		•																			•	•	1
FLIGHT DATA (GCA)	FB(G)																											
FINAL CONTROL (PAR)	FC(P)																											
FINAL CONTROL (ACLS)	FC(B)																											
ARRIVAL CONTROL (GCA)	AR(B)																											
COORDINATOR/SUPERVISOR (GCA)	CS(B)																											
FLIGHT DATA (RDR-RABAR)	FB(N)																											
APPROACH CONTROL (RDR-RABAR)	AC(N)																											
DEPARTURE CONTROL (RDR-RABAR)	BC(N)																											
COORDINATOR/SUPERVISOR (RDR-RABAR)	CS(N)																											
FLIGHT DATA (RABAR)	FB(R)																											
APPROACH CONTROL (RABAR)	AC(R)																											
DEPARTURE CONTROL (RABAR)	BC(R)																											
ARRIVAL CONTROL (RABAR)	AR(R)																											
COORDINATOR/SUPERVISOR (RABAR)	CS(R)																											
FLIGHT DATA (AIR RANGE)	FB(A)																											
MISSION CONTROL (AIR RANGE)	MC(A)																											
AREA CONTROL (AIR RANGE)	RC(A)																											
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)																											
WEATHER SERVICE	WX	•	•				•																					
TRANSIENT LINE	TL	•	•				•																					
AIR TERMINAL	AT	1	1				1																					

KEY
• REQUIRED
1 REQUIRED IF AIR TERMINAL INCORPORATED

NOTE
LINE REQUIRED BETWEEN EACH POSITION OF SAME TYPE IF MORE THAN ONE INSTALLED.

Class II Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS II

PURPOSE: AIRCRAFT CONTROL
FUNCTION: DISPLAYS

	AIRCRAFT LOCATION	AIRCRAFT IDENTIFICATION	AIRCRAFT POSITIONING
DP	FLIGHT DATA		
FB(T)	FLIGHT DATA (TOWER)		
CD	CLEARANCE DELIVERY		
GC	GROUND CONTROL		
LC	LOCAL CONTROL		
PC	PROJECT CONTROL		
CS(T)	COORDINATION/SUPERVISION (TOWER)		
FD(G)	FLIGHT DATA (GCA)		
FC(P)	FINAL CONTROL (PAM)		
FC(S)	FINAL CONTROL (ACTS)		
AN(G)	ARRIVAL CONTROL (GCA)		
CS(G)	COORDINATION/SUPERVISION (GCA)		
FD(N)	FLIGHT DATA (NON-RADAR)		
AC(N)	APPROACH CONTROL (NON-RADAR)		
DC(N)	DEPARTURE CONTROL (NON-RADAR)		
CS(N)	COORDINATION/SUPERVISION (NON-RADAR)		
FB(N)	FLIGHT DATA (RADAR)		
AC(N)	APPROACH CONTROL (RADAR)		
DC(N)	DEPARTURE CONTROL (RADAR)		
AN(N)	ARRIVAL CONTROL (RADAR)		
CS(N)	COORDINATION/SUPERVISION (RADAR)		
FB(A)	FLIGHT DATA (AIR RANGE)		
MC(A)	MISSION CONTROL (AIR RANGE)		
AC(A)	AREA CONTROL (AIR RANGE)		
CS(A)	COORDINATION/SUPERVISION (AIR RANGE)		

NO REQUIREMENT

**ATCF EQUIPMENT STANDARD
 CLASS II**

PURPOSE: INFORMATION SOURCES

FUNCTION: DISPLAYS

	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATION/SUPERVISION (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAN)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATION/SUPERVISION (GCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	COORDINATION/SUPERVISION (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATION/SUPERVISION (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	MCA (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATION/SUPERVISION (AIR RANGE)	
WEATHER	•			•	•		•																				
WINDSPEED AND DIRECTION	•			•	•		•																				
TIME	•	•			•																						
BAROMETRIC PRESSURE	•				•		•																				

KEY: • REQUIRED

Class II Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS II

PURPOSE: FLIGHT PROGRESS DOCUMENTATION

FUNCTION: RECORD/DISPLAY

	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (FAN)	FINAL CONTROL (FACTS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (NON-GA)	APPROACH CONTROL (NON-GA)	APPROACH CONTROL (GADAN)	DEPARTURE CONTROL (GADAN)	DEPARTURE CONTROL (GADAN)	ARRIVAL CONTROL (GADAN)	COORDINATOR/SUPERVISOR (GADAN)	FLIGHT DATA (AIR RANGE)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)
FLIGHT PROGRESS RECORD	•	•	•	•	•																			
FLIGHT PROGRESS DISPLAY	•	•	•	•	•																			

KEY: ○ REQUIRED

**ATCF COMMUNICATIONS STANDARD
CLASS IIIA**

PURPOSE: AIRCRAFT CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher	x						x	x	x	Ship-to-Shore	Master ATCOM Facilities only
Flight Data (Tower)											No Requirement
Clearance Delivery	x			x				x	x	Clearance Delivery	
Clearance Delivery	x				x			x	x	Clearance Delivery	
Ground Control	x			x				x	x	Ground Control	
Ground Control	x				x			x	x	Ground Control	
Ground Control	x			x				x		ATIS	
Local Control	x			x				x	x	Tower Primary	
Local Control		x		x				x	x	Tower Primary	
Local Control			x	x				x	x	Tower Primary	
Local Control	x				x			x	x	Tower Primary	
Local Control		x				x		x	x	Tower Primary	
Local Control			x		x			x	x	Tower Primary	
Local Control	x			x				x	x	LSO Primary	Facilities supporting FCLP requirements
Local Control	x			x				x	x	Emergency (243.0)	

**ATCF COMMUNICATIONS STANDARD
 CLASS IIIA**

PURPOSE: AIRCRAFT CONTROL -Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Local Control		x		x				x	x	Emergency (243.0)	
Local Control			x	x				x	x	Emergency (243.0)	
Local Control	x				x			x	x	Emergency (121.5)	
Local Control		x			x			x	x	Emergency (121.5)	
Local Control			x		x			x	x	Emergency (121.5)	
Local Control	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirement
Coordinator/Supervisor (Tower)	x			x				x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x				x			x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x			x				x	x	Ground Control	
Coordinator/Supervisor (Tower)	x							x	x	Ground Control	
Coordinator/Supervisor (Tower)	x			x				x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x				x			x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x							x	x	LSO Primary	Facilities supporting FCLP requirements
Coordinator/Supervisor (Tower)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (Tower)	x							x	x	Emergency (121.5)	

**ATCF COMMUNICATIONS STANDARD
 CLASS IIIA**

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	VHF (AM)	VHF (FM)	HF					
							UHF (AM)				
Coordinator/Supervisor (Tower)	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirements
Flight Data (GCA)											No Requirement
Final Control (PAR)	x			x				x	x	GCA Primary	
Final Control (PAR)	x				x			x	x	GCA Primary	
Final Control (PAR)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Final Control (PAR)	x			x				x	x	Emergency (243.0)	
Final Control (PAR)	x							x	x	Emergency (121.5)	
Final Control (ACLS)	x							x	x	GCA Primary	
Final Control (ACLS)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Final Control (ACLS)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (GCA)	x			x				x	x	GCA Primary	
Coordinator/Supervisor (GCA)	x									GCA Primary	
Coordinator/Supervisor (GCA)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Coordinator/Supervisor (GCA)	x									Emergency (243.0)	
Coordinator/Supervisor (GCA)	x							x	x	Emergency (121.5)	

**ATCF COMMUNICATIONS STANDARD
 CLASS IIIA**

PURPOSE: VEHICLE CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher											No Requirement
Flight Data (Tower)											
Clearance Delivery											
Ground Control	x				x			x	x	Aircraft Emergency	
Ground Control	x				x			x	x	Fire Emergency	
Ground Control	x				x			x	x	Security	If airport access required by local directive
Ground Control	x				x			x	x	Crew Vehicles	
Local Control											No requirement
Coordinator/Supervisor (Tower)	x				x			x	x	Aircraft Emergency	
Coordinator/Supervisor (Tower)	x				x			x	x	Fire Emergency	
Coordinator/Supervisor (Tower)	x				x			x	x	Security	If airport access required by local directive
Coordinator/Supervisor (Tower)	x				x			x	x	Crew Vehicles	
Flight Data (GCA)											No requirement
Final Control (PAR)											
Final Control (ACLS)											

21 SEP 1988

Class IIIA Equipment Standards

ATCF COMMUNICATIONS STANDARD
ATCF CLASS IIIA

PURPOSE: INTERFACILITY COORDINATION
FUNCTION: EXTERIOR LINES

FUNCTION	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATION/SUPERVISION (TOWER)	FLIGHT DATA (LOCAL)	FINAL CONTROL (FAR)	FINAL CONTROL (FAS)	ARRIVAL CONTROL (ARW)	COORDINATION/SUPERVISION (LOCAL)	FLIGHT DATA (NON-ARW)	APPROACH CONTROL (NON-ARW)	DEPARTURE CONTROL (NON-ARW)	COORDINATION/SUPERVISION (NON-ARW)	FLIGHT DATA (ARW)	APPROACH CONTROL (ARW)	DEPARTURE CONTROL (ARW)	ARRIVAL CONTROL (ARW)	COORDINATION/SUPERVISION (ARW)	FLIGHT DATA (ARW)	MISSION CONTROL (ARW)	AREA CONTROL (ARW)	COORDINATION/SUPERVISION (ARW)	
CONTROL TOWERS WITHIN ATCF AIRSPACE																										
CONTROL TOWERS WITHIN SECTOR AIRSPACE																										
AIRPORTS AT WHICH LOCAL FLIGHTS MAY TERMINATE WITHOUT FILING DD-76																										
APPROACH CONTROL FACILITIES ADJOINING ATCF AIRSPACE																										
APPROACH CONTROL FACILITIES ADJOINING SECTOR AIRSPACE																										
ARTCCs SERVING ATCF AIRSPACE																										
ARTCCs SERVING SECTOR AIRSPACE																										
MCCs WITH WHICH ATCF HAS HANDOFF RESPONSIBILITIES																										
MCCs WITH WHICH SECTOR HAS HANDOFF RESPONSIBILITIES																										
FACFPACs WITH WHICH ATCF HAS HANDOFF RESPONSIBILITIES																										
FACFPACs WITH WHICH SECTOR HAS HANDOFF RESPONSIBILITIES																										
FLIGHT SERVICE STATION SERVING PRIMARY AIRPORT																										
FLIGHT SERVICE STATION SERVING SATELLITE AIRPORTS																										
SAR AGENCY BY STATION OR TOWNSHIP PART OF NATIONAL SAR PLAN																										

KEY
● REQUIRED

ATCF COMMUNICATIONS STANDARD
 ATCF CLASS IIIA

PURPOSE: INTRA-FACILITY COORDINATION
 FUNCTION: INTERIOR LINKS

	DP	FD(T)	CD	GC	LC	PC	CS(T)	FD(G)	FC(P)	FC(S)	AR(G)	CS(G)	FD(N)	AC(N)	DC(N)	CS(N)	FD(R)	AC(R)	DC(R)	AR(R)	CS(R)	FD(A)	MC(A)	RC(A)	CS(A)	WX	TL	AT
	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	COORDINATOR/SUPERVISOR (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	WEATHER SERVICE	TRANSIENT LINK	AIR TERMINAL
FLIGHT DISPATCHER	DP	•					•	•																		•	•	1
FLIGHT DATA (TOWER)	FD(T)	•	•	•	•		•	•																		•	•	1
CLEARANCE DELIVERY	CD		•		•		•																					
GROUND CONTROL	GC		•		•		•																					
LOCAL CONTROL	LC		•	•	•		•	•	•																			
PROJECT CONTROL	PC																											
COORDINATOR/SUPERVISOR (TOWER)	CS(T)	•	•	•	•		•	•	•																	•		
FLIGHT DATA (GCA)	FD(G)	•	•		•		•		•	•																		
FINAL CONTROL (PAR)	FC(P)				•		•	•		•																		
FINAL CONTROL (ACLS)	FC(S)				•		•	•	•																			
ARRIVAL CONTROL (GCA)	AR(G)																											
COORDINATOR/SUPERVISOR (GCA)	CS(G)																											
FLIGHT DATA (NON-RADAR)	FD(N)																											
APPROACH CONTROL (NON-RADAR)	AC(N)																											
DEPARTURE CONTROL (NON-RADAR)	DC(N)																											
COORDINATOR/SUPERVISOR (NON-RADAR)	CS(N)																											
FLIGHT DATA (RADAR)	FD(R)																											
APPROACH CONTROL (RADAR)	AC(R)																											
DEPARTURE CONTROL (RADAR)	DC(R)																											
ARRIVAL CONTROL (RADAR)	AR(R)																											
COORDINATOR/SUPERVISOR (RADAR)	CS(R)																											
FLIGHT DATA (AIR RANGE)	FD(A)																											
MISSION CONTROL (AIR RANGE)	MC(A)																											
AREA CONTROL (AIR RANGE)	RC(A)																											
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)																											
WEATHER SERVICE	WX	•	•				•																					
TRANSIENT LINK	TL	•	•																									
AIR TERMINAL	AT	1	1																									

KEY
 • REQUIRED
 1 REQUIRED IF AIR TERMINAL INCORPORATED

NOTE
 LINK REQUIRED BETWEEN EACH POSITION OF SAME TYPE IF MORE THAN ONE INSTALLED.

Class IIIA Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS IIIA

PURPOSE: AIRCRAFT CONTROL
FUNCTION: DISPLAYS

	FLIGHT DISPATCHER BP	FLIGHT DATA (TOWER) FB(T)	CLEARANCE DELIVERY CA	GROUND CONTROL GC	LOCAL CONTROL LC	PROJECT CONTROL PC	COORDINATOR/SUPERVISOR (TOWER) CS(T)	FLIGHT DATA (GCA) FB(G)	FINAL CONTROL (FAR) FC(F)	FINAL CONTROL (ACLS) FC(S)	ARRIVAL CONTROL (GCA) AR(G)	COORDINATOR/SUPERVISOR (GCA) CA(G)	FLIGHT DATA (NON-RADAR) FB(N)	APPROACH CONTROL (NON-RADAR) AC(N)	DEPARTURE CONTROL (NON-RADAR) DC(N)	COORDINATOR/SUPERVISOR (NON-RADAR) CS(N)	FLIGHT DATA (RADAR) FB(R)	APPROACH CONTROL (RADAR) AC(R)	DEPARTURE CONTROL (RADAR) DC(R)	ARRIVAL CONTROL (RADAR) AR(R)	COORDINATOR/SUPERVISOR (RADAR) CS(R)	FLIGHT DATA (AIR RANGE) FB(A)	MISSION CONTROL (AIR RANGE) MC(A)	AREA CONTROL (AIR RANGE) AC(A)	COORDINATOR/SUPERVISOR (AIR RANGE) CS(A)			
AIRCRAFT LOCATION									•	•																		
AIRCRAFT IDENTIFICATION									•	•																		
AIRCRAFT POSITIONING									•	•																		

KEY: • REQUIRED

**ATCF EQUIPMENT STANDARD
 CLASS IIIA**

PURPOSE: INFORMATION SOURCES

FUNCTION: DISPLAYS

	FLIGHT DISPATCHER (BP)	FLIGHT DATA (TOWER) (FDT)	CLEARANCE DELIVERY (CD)	GROUND CONTROL (GC)	LOCAL CONTROL (LC)	PROJECT CONTROL (PC)	COORDINATOR/SUPERVISOR (TOWER) (CST)	FLIGHT DATA (SCA) (FDI)	SMALL CONTROL (PAM) (FCP)	FINAL CONTROL (FACS) (FCI)	ARRIVAL CONTROL (SCA) (ARI)	COORDINATION/SUPERVISOR (SCA) (CSI)	FLIGHT DATA (MADAN) (FDM)	APPROACH CONTROL (MADAN) (ACI)	DEPARTURE CONTROL (MADAN) (DCI)	COORDINATION/SUPERVISOR (MADAN) (CMI)	ARRIVAL CONTROL (MADAN) (AMI)	DEPARTURE CONTROL (MADAN) (DCI)	COORDINATION/SUPERVISOR (MADAN) (CMI)	FLIGHT DATA (MADAN) (FDM)	APPROACH CONTROL (MADAN) (ACI)	DEPARTURE CONTROL (MADAN) (DCI)	COORDINATION/SUPERVISOR (MADAN) (CMI)	FLIGHT DATA (AIR RANGE) (FBI)	MISSION CONTROL (AIR RANGE) (MCI)	AREA CONTROL (AIR RANGE) (ACI)	COORDINATION/SUPERVISOR (AIR RANGE) (CSI)					
WEATHER	•			•	•		•		•																							
WINDSPEED AND DIRECTION	•			•	•		•		•																							
TIME	•		•	•	•		•																									
BAROMETRIC PRESSURE	•			•	•		•					•																				

KEY: • REQUIRED

**ATCF EQUIPMENT STANDARD
 CLASS IIIA**

**PURPOSE: FLIGHT PROGRESS DOCUMENTATION
 FUNCTION: RECORD/DISPLAY**

	FLIGHT PROGRESS RECORD	FLIGHT PROGRESS DISPLAY
BP FLIGHT DISPATCHER	●	●
FB(T) FLIGHT DATA (TOWER)	●	●
CB CLEARANCE DELIVERY	●	●
GC GROUND CONTROL	●	●
LC LOCAL CONTROL	●	●
PC PROJECT CONTROL		
CS(T) COORDINATOR/SUPERVISOR (TOWER)		
FB(B) FLIGHT DATA (GCA)	●	●
FC(P) FINAL CONTROL (FAN)		
FC(S) FINAL CONTROL (LCL)		
AR(B) ARRIVAL CONTROL (GCA)		
CS(B) COORDINATOR/SUPERVISOR (GCA)		
FB(M) FLIGHT DATA (NON-RADAR)		
AC(M) APPROACH CONTROL (NON-RADAR)		
DC(M) DEPARTURE CONTROL (NON-RADAR)		
CS(M) COORDINATOR/SUPERVISOR (RADAR)		
FB(M) FLIGHT DATA (RADAR)		
AC(M) APPROACH CONTROL (RADAR)		
DC(M) DEPARTURE CONTROL (RADAR)		
AR(M) ARRIVAL CONTROL (RADAR)		
CS(M) COORDINATOR/SUPERVISOR (RADAR)		
FB(A) FLIGHT DATA (AM RANGE)		
MC(A) MISSION CONTROL (AM RANGE)		
NC(A) AREA CONTROL (AM RANGE)		
CS(A) COORDINATOR/SUPERVISOR (AM RANGE)		

KEY: ● REQUIRED

21 SEP 1988

Class IIIB Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IIIB**

PURPOSE: AIRCRAFT CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	MF				
Flight Dispatcher	x						x	x	x	Ship-to-Shore	Master ATCOM facilities only
Flight Data (Tower)											No Requirement
Clearance Delivery	x			x				x	x	Clearance Delivery	
Clearance Delivery	x				x			x	x	Clearance Delivery	
Ground Control	x			x				x	x	Ground Control	
Ground Control	x				x			x	x	Ground Control	
Ground Control	x			x				x		ATIS	
Local Control	x			x				x	x	Tower Primary	
Local Control		x		x				x	x	Tower Primary	
Local Control			x	x				x	x	Tower Primary	
Local Control	x						x	x	x	Tower Primary	
Local Control		x					x	x	x	Tower Primary	
Local Control			x					x	x	Tower Primary	
Local Control	x			x				x	x	LSO Primary	Facilities supporting FCLP Requirements
Local Control	x			x				x	x	Emergency (243.0)	

Class IIIB Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IIIB**

PURPOSE: AIRCRAFT CONTROL -Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UNF (AM)	VHF (AM)	VHF (FM)	HF				
Local Control		x		x				x	x	Emergency (243.0)	
Local Control			x	x				x	x	Emergency (243.0)	
Local Control	x				x			x	x	Emergency (121.5)	
Local Control		x			x			x	x	Emergency (121.5)	
Local Control			x		x			x	x	Emergency (121.5)	
Local Control	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirement
Coordinator/Supervisor (Tower)	x			x				x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x				x			x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x			x				x	x	Ground Control	
Coordinator/Supervisor (Tower)	x				x			x	x	Ground Control	
Coordinator/Supervisor (Tower)	x			x				x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x							x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x			x				x	x	LSO Primary	Facilities supporting FCLP requirements
Coordinator/Supervisor (Tower)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (Tower)	x							x	x	Emergency (121.5)	

Class IIIB Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IIIB**

PURPOSE: AIRCRAFT CONTROL -Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Coordinator/Supervisor (Tower)	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirements
Flight Data (GCA)	x							x	x		No requirement
Final Control (PAR)	x			x				x	x	GCA Primary	
Final Control (PAR)	x				x			x	x	GCA Primary	
Final Control (PAR)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Final Control (PAR)	x			x				x	x	Emergency (243.0)	
Final Control (PAR)	x				x			x	x	Emergency (121.5)	
Final Control (ACLS)	x			x				x	x	GCA Primary	
Final Control (ACLS)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Final Control (ACLS)	x			x				x	x	Emergency (243.0)	
Arrival Control (GCA)	x			x				x	x	GCA Primary	
Arrival Control (GCA)	x				x			x	x	GCA Primary	
Arrival Control (GCA)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Arrival Control (GCA)	x			x				x	x	Emergency 243.0	
Arrival Control (GCA)	x							x	x	Emergency 121.5	

21 SEP 1988

Class IIIB Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IIIB**

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM		FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)				
Coordinator/Supervisor (GCA)	x			x			x	x	GCA Primary	
Coordinator/Supervisor (GCA)	x			x			x	x	GCA Primary	
Coordinator/Supervisor (GCA)	x			x			x	x	Single Frequency Approach	All assigned to ATCF
Coordinator/Supervisor (GCA)	x			x			x	x	Emergency (243.0)	
Coordinator/Supervisor (GCA)	x				x		x	x	Emergency (121.5)	

**ATCF COMMUNICATIONS STANDARD
CLASS IIIB**

PURPOSE: VEHICLE CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher											No Requirement
Flight Data (Tower)											
Clearance Delivery											
Ground Control	x					x		x	x	Aircraft Emergency	
Ground Control	x					x		x	x	Fire Emergency	
Ground Control	x					x		x	x	Security	If airport access required by local directive
Ground Control	x					x		x	x	Crew Vehicles	
Local Control											No Requirement
Coordinator/Supervisor (Tower)	x					x		x	x	Aircraft Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Fire Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Security	If airport access required by local directive
Coordinator/Supervisor (Tower)	x					x		x	x	Crew Vehicles	
Flight Data (GCA)											No Requirement
Final Control (PAR)											
Final Control (ACLS)											

Class IIIB Equipment Standards

ATCF COMMUNICATIONS STANDARD
ATCF CLASS IIIB

PURPOSE: INTRA-FACILITY COORDINATION
FUNCTION: INTERIOR LINKS

	DP	FB(T)	CB	GC	LC	PC	CS(T)	FB(G)	FC(P)	FC(S)	AR(S)	CS(S)	FB(R)	AC(R)	DC(R)	CS(R)	FB(R)	AC(R)	DC(R)	AR(R)	CS(R)	FB(A)	MC(A)	AC(A)	CS(A)	WX	TL	AT
	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	COORDINATOR/SUPERVISOR (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	WEATHER SERVICE	TRANSMIT LINE	AIR TERMINAL
FLIGHT DISPATCHER	DP	•					•	•																		•	•	1
FLIGHT DATA (TOWER)	FB(T)	•	•	•	•		•	•																		•	•	1
CLEARANCE DELIVERY	CB	•			•		•																					
GROUND CONTROL	GC	•			•		•																					
LOCAL CONTROL	LC	•	•	•			•	•	•	•	•	•																
PROJECT CONTROL	PC																											
COORDINATOR/SUPERVISOR (TOWER)	CS(T)	•	•	•	•		•	•	•	•	•	•														•	•	1
FLIGHT DATA (GCA)	FB(G)	•	•		•		•	•	•	•	•	•														•		
FINAL CONTROL (PAR)	FC(P)				•		•	•		•	•	•																
FINAL CONTROL (ACLS)	FC(S)				•		•	•	•		•	•																
ARRIVAL CONTROL (GCA)	AR(S)				•		•	•	•	•		•																
COORDINATOR/SUPERVISOR (GCA)	CS(S)				•		•	•	•	•	•															•		
FLIGHT DATA (NON-RADAR)	FB(R)																											
APPROACH CONTROL (NON-RADAR)	AC(R)																											
DEPARTURE CONTROL (NON-RADAR)	DC(R)																											
COORDINATOR/SUPERVISOR (NON-RADAR)	CS(R)																											
FLIGHT DATA (RADAR)	FB(R)																											
APPROACH CONTROL (RADAR)	AC(R)																											
DEPARTURE CONTROL (RADAR)	DC(R)																											
ARRIVAL CONTROL (RADAR)	AR(R)																											
COORDINATOR/SUPERVISOR (RADAR)	CS(R)																											
FLIGHT DATA (AIR RANGE)	FB(A)																											
MISSION CONTROL (AIR RANGE)	MC(A)																											
AREA CONTROL (AIR RANGE)	AC(A)																											
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)																											
WEATHER SERVICE	WX	•	•				•	•				•																
TRANSMIT LINE	TL	•	•				•																					
AIR TERMINAL	AT	1	1				1																					

KEY
• REQUIRED
1 REQUIRED IF AIR TERMINAL INCORPORATED

NOTE
LINK REQUIRED BETWEEN EACH POSITION OF SAME TYPE IF MORE THAN ONE INSTALLED

**ATCF EQUIPMENT STANDARD
 CLASS IIIB**

PURPOSE: AIRCRAFT CONTROL
 FUNCTION: DISPLAYS

	AIRCRAFT LOCATION	AIRCRAFT IDENTIFICATION	AIRCRAFT POSITIONING
BP FLIGHT DISPATCHER (TOWER)			
FB(T) FLIGHT DATA (TOWER)			
CB CLEARANCE DELIVERY			
GC GROUND CONTROL			
LC LOCAL CONTROL			
PC PROJECT CONTROL			
CS(T) COORDINATOR/SUPERVISOR (TOWER)			
FB(S) FLIGHT DATA (SCA)			
FC(P) FINAL CONTROL (PAN)	•	•	•
FC(S) FINAL CONTROL (ACTS)	•	•	•
AR(S) ARRIVAL CONTROL (SCA)	•	•	
CS(S) COORDINATOR/SUPERVISOR (SCA)			
FB(N) FLIGHT DATA (NON-RADAR)			
AP(N) APPROACH CONTROL (NON-RADAR)			
DC(N) DEPARTURE CONTROL (NON-RADAR)			
CS(N) COORDINATOR/SUPERVISOR (RADAR)			
AR(N) ARRIVAL CONTROL (RADAR)			
DC(N) DEPARTURE CONTROL (RADAR)			
AC(N) APPROACH CONTROL (RADAR)			
FB(N) FLIGHT DATA (RADAR)			
AP(N) APPROACH CONTROL (RADAR)			
CS(N) COORDINATOR/SUPERVISOR (MADAN)			
FB(A) FLIGHT DATA (AIR RANGE)			
MI(N) MISSION CONTROL (AIR RANGE)			
MC(A) MISSION CONTROL (AIR RANGE)			
NC(A) AREA CONTROL (AIR RANGE)			
CS(A) COORDINATOR/SUPERVISOR (AIR RANGE)			

KEY:
 • REQUIRED

**ATCF EQUIPMENT STANDARD
 CLASS IIIB**

PURPOSE: INFORMATION SOURCES
 FUNCTION: DISPLAYS

	BP	FB(T)	CB	GC	LC	PC	COORDINATOR/SUPERVISOR (TOWER) (CS(T))	FLIGHT DATA (GCA)	FINAL CONTROL (FAP)	FINAL CONTROL (ACTS) (FC(S))	ARRIVAL CONTROL (SCA)	COORDINATOR/SUPERVISOR (SCA)	FLIGHT DATA (NON-RADAR) (FB(N))	APPROACH CONTROL (NON-RADAR) (AC(N))	DEPARTURE CONTROL (NON-RADAR) (DC(N))	COORDINATOR/SUPERVISOR (NON-RADAR) (CS(N))	FLIGHT DATA (RADAR) (FB(R))	APPROACH CONTROL (RADAR) (AC(R))	DEPARTURE CONTROL (RADAR) (DC(R))	ARRIVAL CONTROL (RADAR) (AR(R))	COORDINATOR/SUPERVISOR (RADAR) (CS(R))	FLIGHT DATA (AIR RANGE) (FB(A))	MISSION CONTROL (AIR RANGE) (MC(A))	AREA CONTROL (AIR RANGE) (AC(A))	COORDINATOR/SUPERVISOR (AIR RANGE) (CS(A))		
WEATHER	•																										
WINDSPEED AND DIRECTION	•																										
TIME	•																										
BAROMETRIC PRESSURE	•	•	•	•	•	•	•	•			•	•															

KEY: • REQUIRED

Class IIIB Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS IIIB

PURPOSE: FLIGHT PROGRESS DOCUMENTATION

FUNCTION: RECORD/DISPLAY

	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACTS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	COORDINATOR/SUPERVISOR (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	
	•	•	•	•	•			•			•															
	•	•	•	•	•			•																		
	•	•	•	•	•																					
	•	•	•	•	•																					
	•	•	•	•	•																					
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21 SEP 1988

Class IVA Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IVA**

PURPOSE: AIRCRAFT CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher	x						x	x	x	Ship-to-Shore	Master ATCOM facilities only
Flight Data (Tower)											No Requirement
Clearance Delivery	x			x				x	x	Clearance Delivery	
Clearance Delivery	x				x			x	x	Clearance Delivery	
Ground Control	x			x				x	x	Ground Control	
Ground Control	x				x			x	x	Ground Control	
Ground Control	x			x				x		ATIS	
Local Control	x			x				x	x	Tower Primary	
Local Control		x		x				x	x	Tower Primary	
Local Control			x	x				x	x	Tower Primary	
Local Control	x						x	x	x	Tower Primary	
Local Control		x					x	x	x	Tower Primary	
Local Control			x					x	x	Tower Primary	
Local Control	x			x				x	x	LSO Primary	Facilities supporting FCLP requirements
Local Control	x			x				x	x	Emergency (243.0)	

**ATCF COMMUNICATIONS STANDARD
 CLASS IVA**

PURPOSE: AIRCRAFT CONTROL - Continued

OPERATING POSITION	SYSTEM			FREQUENCY				RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF			
Local Control	X			X				X	Emergency (243.0)	
Local Control			X	X				X	Emergency (243.0)	
Local Control	X				X			X	Emergency (121.5)	
Local Control		X			X			X	Emergency (121.5)	
Local Control			X		X			X	Emergency (121.5)	Facilities supporting defined SAR requirements
Local Control	X			X				X	SAR (282.8)	
Coordinator/Supervisor (Tower)	X				X			X	Clearance Delivery	
Coordinator/Supervisor (Tower)	X							X	Clearance Delivery	
Coordinator/Supervisor (Tower)	X			X				X	Ground Control	
Coordinator/Supervisor (Tower)	X			X				X	Ground Control	
Coordinator/Supervisor (Tower)	X			X				X	Tower Primary	
Coordinator/Supervisor (Tower)	X				X			X	Tower Primary	
Coordinator/Supervisor (Tower)	X			X				X	LSO Primary	Facilities supporting defined SAR requirements
Coordinator/Supervisor (Tower)	X			X				X	Emergency (243.0)	
Coordinator/Supervisor (Tower)	X				X			X	Emergency (121.5)	
Coordinator/Supervisor (Tower)	X							X	SAR (282.8)	Facilities supporting FCLP requirements

Class IVA Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IVA**

PURPOSE: AIRCRAFT CONTROL - Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Data (GCA)											No Requirement (Note 1)
Final Control (PAR)	x			x				x	x	GCA Primary	(Note 1)
Final Control (PAR)	x				x			x	x	GCA Primary	(Note 1)
Final Control (PAR)	x			x				x	x	Single Frequency Approach	All assigned to ATCF (Note 1)
Final Control (PAR)	x			x				x	x	Emergency (243.0)	(Note 1)
Final Control (PAR)	x				x			x	x	Emergency (121.5)	(Note 1)
Final Control (ACLS)	x			x				x	x	GCA Primary	(Note 1)
Final Control (ACLS)	x			x				x	x	Single Frequency Approach	All assigned to ATCF (Note 1)
Final Control (ACLS)	x			x				x	x	Emergency (243.0)	(Note 1)
Arrival Control (GCA)	x			x				x	x	GCA Primary	(Note 1)
Arrival Control (GCA)	x				x			x	x	GCA Primary	(Note 1)
Arrival Control (GCA)	x			x				x	x	Single Frequency Approach	All assigned to ATCF (Note 1)
Arrival Control (GCA)	x			x				x	x	Emergency (243.0)	(Note 1)
Arrival Control (GCA)	x				x			x	x	Emergency (121.5)	(Note 1)
Coordinator/Supervisor (GCA)	x			x				x	x	GCA Primary	(Note 1)

Note 1: If Low Approach and Landing Service incorporated

Class IVA Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS IVA

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Coordinator/Supervisor (GCA)	x				x			x	x	GCA Primary	(Note 1)
Coordinator/Supervisor (GCA)	x			x				x	x	Single Frequency Approach	All assigned to ATCF (Note 1)
Coordinator/Supervisor (GCA)	x			x				x	x	Emergency (243.0)	(Note 1)
Coordinator/Supervisor (GCA)	x				x			x	x	Emergency (121.5)	(Note 1)
Flight Data (Non-Radar)											No Requirement
Approach Control (Non-Radar)	x			x				x	x	Approach Sector Primary	
Approach Control (Non-Radar)		x		x				x	x	Approach Sector Primary	
Approach Control (Non-Radar)	x							x	x	Approach Sector Primary	
Approach Control (Non-Radar)		x			x			x	x	Approach Sector Primary	
Approach Control (Non-Radar)	x			x				x	x	Approach Sector Secondary	Multi-Sector facilities use other approach sector primary
Approach Control (Non-Radar)	x							x	x	Approach Sector Secondary	↓
Approach Control (Non-Radar)	x			x				x	x	Single Frequency Approach	All assigned to ATCF (Note 1)
Approach Control (Non-Radar)	x			x				x	x	Emergency (243.0)	
Approach Control (Non-Radar)		x		x				x	x	Emergency (243.0)	(Note 2)
Approach Control (Non-Radar)	x							x	x	Emergency (121.5)	

Note 1: If Low Approach and Landing Service incorporated

2: If Terminal Area Control Service not located in tower cab

Class IVA Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS IVA

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (SR)	VHF (AM)	VHF (FM)	HF			
Approach Control (Non-Radar)	x				x			x	Emergency (121.5)	(Note 2)
Approach Control (Non-Radar)	x			x				x	SAR (282.8)	Facilities supporting defined SAR requirement (Note 2)
Departure Control (Non-Radar)	x			x				x	Departure Sector Primary	
Departure Control (Non-Radar)		x		x				x	Departure Sector Primary	
Departure Control (Non-Radar)	x							x	Departure Sector Primary	
Departure Control (Non-Radar)		x						x	Departure Sector Primary	
Departure Control (Non-Radar)	x				x			x	Departure Sector Primary	
Departure Control (Non-Radar)	x							x	Departure Sector Primary	
Departure Control (Non-Radar)	x			x				x	Departure Sector Secondary	Multi-Sector facilities use other departure sector primary
Departure Control (Non-Radar)	x							x	Departure Sector Secondary	↓
Departure Control (Non-Radar)	x			x				x	Emergency (243.0)	
Departure Control (Non-Radar)	x							x	Emergency (121.5)	
Coordinator/Supervisor (Non-Radar)	x			x				x	Approach Sector Primary	
Coordinator/Supervisor (Non-Radar)	x							x	Approach Sector Primary	
Coordinator/Supervisor (Non-Radar)	x			x				x	Approach Sector Secondary	
Coordinator/Supervisor (Non-Radar)	x							x	Approach Sector Secondary	
Coordinator/Supervisor (Non-Radar)	x			x				x	Single Frequency	All assigned to ATCF (Note 1)

Note 1: If Low Approach and Landing Service incorporated

Note 2: If Terminal Area Control Service not located in tower cab

Class IVA Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS IVA

PURPOSE: AIRCRAFT CONTROL - Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Coordinator/Supervisor (Non-Radar)	x			x				x	x	Departure Sector Primary	
Coordinator/Supervisor (Non-Radar)	x				x			x	x	Departure Sector Primary	
Coordinator/Supervisor (Non-Radar)	x			x				x	x	Departure Sector Secondary	
Coordinator/Supervisor (Non-Radar)	x				x			x	x	Departure Sector Secondary	
Coordinator/Supervisor (Non-Radar)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (Non-Radar)	x				x			x	x	Emergency (121.5)	
Coordinator/Supervisor (Non-Radar)	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirement (Note 2)

Note 1: If Low Approach and Landing Service incorporated
2: If Terminal Area Control Service not located in tower cab

**ATCF COMMUNICATIONS STANDARD
CLASS IVA**

PURPOSE: VEHICLE CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher											No Requirement
Flight Data (Tower)											↓
Clearance Delivery											↓
Ground Control	x				x			x	x	Aircraft Emergency	
Ground Control	x				x			x	x	Fire Emergency	
Ground Control	x				x			x	x	Security	If airport access required by local directive
Ground Control	x				x			x	x	Crew Vehicles	↓
Local Control											No requirement
Coordinator/Supervisor (Tower)	x					x		x	x	Aircraft Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Fire Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Security	If airport access required by local directive
Coordinator/Supervisor (Tower)	x					x		x	x	Crew Vehicles	If airport access required by local directive
Flight Data (GCA)											No requirement (Note 1)
Final Control (PAR)											↓
Final Control (ACLS)											↓

Note 1: If Low Approach and Landing Service incorporated

21 SEP 1988

Class IVA Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS IVA**

PURPOSE: VEHICLE CONTROL - Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Arrival Control (GCA)											No Requirement (Note 1)
Coordinator/Supervisor (GCA)											
Flight Data (Non-Radar)											
Approach Control (Non-Radar)											
Departure Control (Non-Radar)											
Coordinator/Supervisor (Non-Radar)											

Note 1: If Low Approach and Landing Service incorporated

ATCF COMMUNICATIONS STANDARD
ATCF CLASS IVA

PURPOSE: INTERFACILITY COORDINATION
FUNCTION: EXTERIOR LINES

	BP	FDIT	CD	GC	LC	PC	CSIT	FLIGHT DATA (GCA)	FCIP	FCIS	AMIC	CSIG	FLIGHT DATA (NON-NADAN)	APPROACH CONTROL (NON-NADAN)	DEPARTURE CONTROL (NON-NADAN)	COORDINATION/SUPERVISION (NON-NADAN)	CSIN	FLIGHT DATA (NADAN)	APPROACH CONTROL (NADAN)	DEPARTURE CONTROL (NADAN)	ARRIVAL CONTROL (NADAN)	COORDINATION/SUPERVISION (NADAN)	CSIN	FLIGHT DATA (IAM RANGE)	MISSION CONTROL (IAM RANGE)	MCIA	AREA CONTROL (IAM RANGE)	RCIA	COORDINATION/SUPERVISION (IAM RANGE)
CONTROL TOWERS WITHIN ATCF AIRSPACE					●		●	-																					
CONTROL TOWERS WITHIN SECTOR AIRSPACE							●																						
AIRPORTS AT WHICH LOCAL FLIGHTS MAY TERMINATE WITHOUT FILING DD-75	●	●					●																						
APPROACH CONTROL FACILITIES ADJOINING ATCF AIRSPACE		●					●																						
APPROACH CONTROL FACILITIES ADJOINING SECTOR AIRSPACE		●					●																						
ARTCCs SERVING ATCF AIRSPACE	●						●																						
ARTCCs SERVING SECTOR AIRSPACE																													
ROCs WITH WHICH ATCF HAS HANDOFF RESPONSIBILITIES		●					●																						
ROCs WITH WHICH SECTOR HAS HANDOFF RESPONSIBILITIES		●					●																						
FACSFACs WITH WHICH ATCF HAS HANDOFF RESPONSIBILITIES		●					●																						
FACSFACs WITH WHICH SECTOR HAS HANDOFF RESPONSIBILITIES		●					●																						
FLIGHT SERVICE STATION SERVING PRIMARY AIRPORT	●																												
FLIGHT SERVICE STATION SERVING SATELLITE AIRPORTS	●																												
SAR AGENCY (OR STATION OR TERTIARY PART OF NATIONAL SAR PLAN)	●	●					●																						

KEY
● REQUIRED
1 REQUIRED IF LOW APPROACH AND LANDING SERVICE INCORPORATED

ATCF COMMUNICATIONS STANDARD
 ATCF CLASS IVA

PURPOSE: INTRA-FACILITY COORDINATION
 FUNCTION: INTERIOR LINKS

	DP	FD(I)	CD	GC	LC	PC	CS(T)	FD(G)	FC(P)	FC(S)	AR(G)	CS(G)	FD(R)	AC(R)	DC(R)	CS(R)	FD(R)	AC(R)	DC(R)	AR(R)	CS(R)	FD(A)	MC(A)	RC(A)	CS(A)	WX	TL	AT
	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (SCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (SCA)	COORDINATOR/SUPERVISOR (SCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	COORDINATOR/SUPERVISOR (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	WEATHER SERVICE	TRANSIENT LINE	AIR TERMINAL
FLIGHT DISPATCHER	DP	•					•	3																	•	•	1	
FLIGHT DATA (TOWER)	FD(I)	•	•	•	•		•	3					2	•	•	•										•	•	1
CLEARANCE DELIVERY	CD	•					•						2		•													
GROUND CONTROL	GC	•					•																					
LOCAL CONTROL	LC	•	•	•			•	3	3	3	3				•	•	2											
PROJECT CONTROL	PC																											
COORDINATOR/SUPERVISOR (TOWER)	CS(T)	•	•	•	•	•	•	3	3	3	3		2	•	•	2									•	•	1	
FLIGHT DATA (SCA)	FD(G)	3	3		3	3	3	3	3	3	3		3	3		3									3			
FINAL CONTROL (PAR)	FC(P)				3	3	3	3		3	3																	
FINAL CONTROL (ACLS)	FC(S)				3	3	3	3	3		3																	
ARRIVAL CONTROL (SCA)	AR(G)				3	3	3	3	3	3			3		2,3													
COORDINATOR/SUPERVISOR (SCA)	CS(G)																											
FLIGHT DATA (NON-RADAR)	FD(R)		2	2			2	3																				
APPROACH CONTROL (NON-RADAR)	AC(R)		•		•	•	•	3		3																		
DEPARTURE CONTROL (NON-RADAR)	DC(R)		•	•	•	•	•																					
COORDINATOR/SUPERVISOR (NON-RADAR)	CS(R)		•		2	2	2	3		2,3																		
FLIGHT DATA (RADAR)	FD(R)																											
APPROACH CONTROL (RADAR)	AC(R)																											
DEPARTURE CONTROL (RADAR)	DC(R)																											
ARRIVAL CONTROL (RADAR)	AR(R)																											
COORDINATOR/SUPERVISOR (RADAR)	CS(R)																											
FLIGHT DATA (AIR RANGE)	FD(A)																											
MISSION CONTROL (AIR RANGE)	MC(A)																											
AREA CONTROL (AIR RANGE)	RC(A)																											
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)																											
WEATHER SERVICE	WX	•	•				•	3																				
TRANSIENT LINE	TL	•	•				•																					
AIR TERMINAL	AT	1	1				1																					

KEY
 • REQUIRED
 1 REQUIRED IF AIR TERMINAL INCORPORATED
 2 REQUIRED IF TERMINAL IFR SERVICE NOT PROVIDED FROM TOWER CAB
 3 REQUIRED IF LOW APPROACH AND LANDING SERVICE PROVIDED

NOTE
 LINK REQUIRED BETWEEN EACH POSITION OF SAME TYPE IF MORE THAN ONE INSTALLED

Class IVA Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS IVA

PURPOSE: AIRCRAFT CONTROL
FUNCTION: DISPLAYS

	AIRCRAFT LOCATION	AIRCRAFT IDENTIFICATION	AIRCRAFT POSITIONING
DF	FLIGHT DISPATCHER		
FD(T)	FLIGHT DATA (TOWER)		
CB	CLEARANCE DELIVERY		
GC	GROUND CONTROL		
LC	LOCAL CONTROL		
PC	PROJECT CONTROL		
CS(T)	COORDINATOR/SUPERVISOR (TOWER)		
FD(G)	FLIGHT DATA (GCA)		
FC(P)	FINAL CONTROL (P)	-	-
FC(S)	FINAL CONTROL (S)	-	-
AR(G)	ARRIVAL CONTROL (GCA)	-	-
CS(G)	COORDINATOR/SUPERVISOR (GCA)		
FD(N)	FLIGHT DATA (NON-RADAR)		
AC(N)	APPROACH CONTROL (NON-RADAR)		
DC(N)	DEPARTURE CONTROL (NON-RADAR)		
CS(N)	COORDINATOR/SUPERVISOR (NON-RADAR)		
FD(N)	FLIGHT DATA (RADAR)		
AC(N)	APPROACH CONTROL (RADAR)		
DC(N)	DEPARTURE CONTROL (RADAR)		
CS(N)	COORDINATOR/SUPERVISOR (RADAR)		
FD(A)	FLIGHT DATA (AIR RANGE)		
MC(A)	MISSION CONTROL (AIR RANGE)		
AC(A)	AREA CONTROL (AIR RANGE)		
CS(A)	COORDINATOR/SUPERVISOR (AIR RANGE)		

KEY: ● REQUIRED

Enclosure (1)
ATTACHMENT E

**ATCF EQUIPMENT STANDARD
 CLASS IVA**

PURPOSE: INFORMATION SOURCES
 FUNCTION: DISPLAYS

	BP	FLIGHT DATA (TOWEN) FD(T)	CLEARANCE DELIVERY CD	GROUND CONTROL GC	LOCAL CONTROL LC	PROJECT CONTROL PC	COORDINATOR/SUPERVISOR (TOWEN) CS(T)	FLIGHT DATA (GCA) FD(G)	FMAL CONTROL (PAR) FC(P)	FMAL CONTROL (ACS) FC(S)	ARRIVAL CONTROL (GCA) AR(G)	COORDINATOR/SUPERVISOR (GCA) CS(G)	FLIGHT DATA (NON-RADAR) FD(N)	APPROACH CONTROL (NON-RADAR) AC(N)	DEPARTURE CONTROL (NON-RADAR) DC(N)	COORDINATOR/SUPERVISOR (NON-RADAR) CS(N)	FLIGHT DATA (RADAR) FD(R)	APPROACH CONTROL (RADAR) AC(R)	DEPARTURE CONTROL (RADAR) DC(R)	ARRIVAL CONTROL (RADAR) AR(R)	COORDINATOR/SUPERVISOR (RADAR) CS(R)	FLIGHT DATA (AM RANGE) FD(A)	MISSION CONTROL (AM RANGE) MC(A)	AREA CONTROL (AM RANGE) AC(A)	COORDINATOR/SUPERVISOR (AM RANGE) CS(A)			
WEATHER	•			•	•		•																					
WINDSPEED AND DIRECTION	•			•	•		•																					
TIME	•	•	•	•	•		•						•															
BAROMETRIC PRESSURE								•																				

KEY:
 • REQUIRED
 1 REQUIRED IF LOW APPROACH AND LANDING SERVICE INCORPORATED

**ATCF COMMUNICATIONS STANDARD
 CLASS IVB**

PURPOSE: AIRCRAFT CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher	x						x	x		Ship-to-Shore	Master ATCOM facilities only
Flight Data (Tower)											No Requirement
Clearance Delivery	x			x				x	x	Clearance Delivery	
Clearance Delivery	x				x			x	x	Clearance Delivery	
Ground Control	x			x				x	x	Ground Control	
Ground Control	x				x			x	x	Ground Control	
Ground Control	x			x				x		ATIS	
Local Control	x			x				x	x	Tower Primary	
Local Control		x		x				x	x	Tower Primary	
Local Control			x	x				x	x	Tower Primary	
Local Control	x				x			x	x	Tower Primary	
Local Control		x			x			x	x	Tower Primary	
Local Control			x		x			x	x	Tower Primary	
Local Control	x			x				x	x	LSO Primary	Facilities supporting FCLP requirements
Local Control	x			x				x	x	Emergency (243.0)	

**ATCF COMMUNICATIONS STANDARD
 CLASS IVB**

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Local Control	x			x				x	x	Emergency (243.0)	
Local Control			x	x				x	x	Emergency (243.0)	
Local Control	x				x			x	x	Emergency (121.5)	
Local Control		x			x			x	x	Emergency (121.5)	
Local Control			x		x			x	x	Emergency (121.5)	
Local Control	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirement
Coordinator/Supervisor (Tower)	x			x				x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x				x			x	x	Clearance Delivery	
Coordinator/Supervisor (Tower)	x						x	x	x	Ground Control	
Coordinator/Supervisor (Tower)	x						x	x	x	Ground Control	
Coordinator/Supervisor (Tower)	x						x	x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x						x	x	x	Tower Primary	
Coordinator/Supervisor (Tower)	x			x				x	x	LSO Primary	Facilities supporting FCLP requirements
Coordinator/Supervisor (Tower)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (Tower)	x							x	x	Emergency (121.5)	

Class IVB Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS IVB

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UNF (AM)	VHF (AM)	VHF (FM)	NF				
Coordinator/Supervisor (Tower)	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirements
Final Control (PAR)	x			x				x	x	GCA Primary	
Final Control (PAR)	x				x			x	x	GCA Primary	
Final Control (PAR)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Final Control (PAR)	x			x				x	x	Emergency (243.0)	
Final Control (PAR)	x				x			x	x	Emergency (121.5)	
Final Control (ACLS)	x			x				x	x	GCA Primary	
Final Control (ACLS)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Final Control (ACLS)	x			x				x	x	Emergency (243.0)	
Flight Data (Radar)											No Requirement
Approach Control (Radar)	x			x				x	x	Approach Sector Primary	
Approach Control (Radar)		x		x				x	x	Approach Sector Primary	
Approach Control (Radar)	x				x			x	x	Approach Sector Primary	
Approach Control (Radar)		x			x			x	x	Approach Sector Primary	
Approach Control (Radar)	x							x	x	Approach Sector Secondary	Multi-Sector facilities use other approach sector primary

ATCF COMMUNICATIONS STANDARD
CLASS IVB

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UNF (AM)	VHF (AM)	VHF (FM)	HF				
Approach Control (Radar)	x				x			x	x	Approach Sector Secondary	Multi-Sector facilities use other approach sector primary
Approach Control (Radar)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Approach Control (Radar)	x			x				x	x	Emergency (243.0)	
Approach Control (Radar)		x		x				x	x	Emergency (243.0)	
Approach Control (Radar)	x				x			x	x	Emergency (121.5)	
Approach Control (Radar)		x			x			x	x	Emergency (121.5)	
Approach Control (Radar)	x			x				x	x	SAR (282.8)	Facilities supporting defined SAR requirement
Departure Control (Radar)	x			x				x	x	Departure Sector Primary	
Departure Control (Radar)		x		x				x	x	Departure Sector Primary	
Departure Control (Radar)	x			x				x	x	Departure Sector Primary	
Departure Control (Radar)		x			x			x	x	Departure Sector Primary	
Departure Control (Radar)	x			x				x	x	Departure Sector Secondary	Multi-Sector facilities use other departure sector primary
Departure Control (Radar)	x				x			x	x	Departure Sector Secondary	
Departure Control (Radar)	x			x				x	x	Emergency (243.0)	
Departure Control (Radar)	x							x	x	Emergency (121.5)	

21 SEP 1988

ATCF COMMUNICATIONS STANDARD
CLASS IVB

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UNF (AM)	VHF (AM)	VHF (FM)	HF				
Arrival Control (Radar)	x			x				x	x	GCA Primary	
Arrival Control (Radar)	x				x			x	x	GCA Primary	
Arrival Control (Radar)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Arrival Control (Radar)	x			x				x	x	Emergency (243.0)	
Arrival Control (Radar)	x				x			x	x	Emergency (121.5)	
Coordinator/Supervisor (Radar)	x			x				x	x	GCA Primary	
Coordinator/Supervisor (Radar)	x							x	x	GCA Primary	
Coordinator/Supervisor (Radar)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Coordinator/Supervisor (Radar)	x			x				x	x	Approach Sector Primary	
Coordinator/Supervisor (Radar)	x				x			x	x	Approach Sector Primary	
Coordinator/Supervisor (Radar)	x							x	x	Approach Sector Secondary	
Coordinator/Supervisor (Radar)	x				x			x	x	Approach Sector Secondary	
Coordinator/Supervisor (Radar)	x			x				x	x	Single Frequency Approach	All assigned to ATCF
Coordinator/Supervisor (Radar)	x			x				x	x	Departure Sector Primary	
Coordinator/Supervisor (Radar)	x							x	x	Departure Sector Primary	

21 SEP 1988

Class IVB Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS IVB

PURPOSE: VEHICLE CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	GHF (AM)	VNF (AM)	VNF (FM)	HF				
Flight Dispatcher											No Requirement
Flight Data (Tower)											No Requirement
Clearance Delivery											No Requirement
Ground Control	x					x		x	x	Aircraft Emergency	
Ground Control	x					x		x	x	Fire Emergency	
Ground Control	x					x		x	x	Security	If airport access required by local directive
Ground Control	x					x		x	x	Crew Vehicles	
Local Control											No Requirement
Coordinator/Supervisor (Tower)	x					x		x	x	Aircraft Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Fire Emergency	
Coordinator/Supervisor (Tower)	x					x		x	x	Security	If airport access required by local directive
Coordinator/Supervisor (Tower)	x					x		x	x	Crew Vehicles	
Final Control (PAR)											No Requirement
Final Control (ACLS)											No Requirement
Flight Data (Radar)											No Requirement

ATCF COMMUNICATIONS STANDARD
CLASS IVB

PURPOSE: VEHICLE CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				RECEIVE	TRANSMIT	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Approach Control (Radar)											No Requirement
Departure Control (Radar)											
Coordinator/Supervisor (Radar)											

ATCF COMMUNICATIONS STANDARD
 ATCF CLASS IVB

PURPOSE: INTERFACILITY COORDINATION
 FUNCTION: EXTERIOR LINES

FUNCTION	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (LOCAL)	FINAL CONTROL (FAN)	FINAL CONTROL (FACTS)	ARRIVAL CONTROL (LOCAL)	COORDINATOR/SUPERVISOR (LOCAL)	FLIGHT DATA (NON-ARRIVAL)	APPROACH CONTROL (NON-ARRIVAL)	DEPARTURE CONTROL (NON-ARRIVAL)	COORDINATOR/SUPERVISOR (NON-ARRIVAL)	FLIGHT DATA (ARRIVAL)	APPROACH CONTROL (ARRIVAL)	DEPARTURE CONTROL (ARRIVAL)	ARRIVAL CONTROL (ARRIVAL)	COORDINATOR/SUPERVISOR (ARRIVAL)	FLIGHT DATA (ARRIVAL)	MISSION CONTROL (ARRIVAL)	AREA CONTROL (ARRIVAL)	COORDINATOR/SUPERVISOR (ARRIVAL)	
CONTROL TOWERS WITHIN ATCF AIRSPACE																										
CONTROL TOWERS WITHIN SECTOR AIRSPACE																										
AIRPORTS AT WHICH LOCAL FLIGHTS MAY TERMINATE WITHOUT FILING DD-76																										
APPROACH CONTROL FACILITIES ADJOINING ATCF AIRSPACE																										
APPROACH CONTROL FACILITIES ADJOINING SECTOR AIRSPACE																										
ARTCCs SERVING ATCF AIRSPACE																										
ARTCCs SERVING SECTOR AIRSPACE																										
ROCs WITH WHICH ATCF HAS HANDOFF RESPONSIBILITIES																										
ROCs WITH WHICH SECTOR HAS HANDOFF RESPONSIBILITIES																										
FACSFACs WITH WHICH ATCF HAS HANDOFF RESPONSIBILITIES																										
FACSFACs WITH WHICH SECTOR HAS HANDOFF RESPONSIBILITIES																										
FLIGHT SERVICE STATION SERVING PRIMARY AIRPORT																										
FLIGHT SERVICE STATION SERVING SATELLITE AIRPORTS																										
SAR AGENCY (IF STATION OR TENANT PART OF NATIONAL SAR PLAN)																										

KEY ● REQUIRED

ATCF COMMUNICATIONS STANDARD
 ATCF CLASS IVB

PURPOSE: INTRA-FACILITY COORDINATION
 FUNCTION: INTERIOR LINKS

	BP	FB(T)	CD	GC	LC	PC	CS(T)	FB(G)	FC(P)	FC(S)	AR(G)	CS(G)	FB(R)	AC(R)	DC(R)	CS(R)	FB(R)	AC(R)	DC(R)	AR(R)	CS(R)	FB(A)	MC(A)	RC(A)	CS(A)	WX	TL	AT
	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (NON-RADAR)	APPROACH CONTROL (NON-RADAR)	DEPARTURE CONTROL (NON-RADAR)	COORDINATOR/SUPERVISOR (NON-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	WEATHER SERVICE	TRANSMIT LINE	AIR TERMINAL
FLIGHT DISPATCHER	BP	•					•										•				•						•	•
FLIGHT DATA (TOWER)	FB(T)	•	•	•	•		•										•	•	•		•						•	•
CLEARANCE DELIVERY	CD		•																									
GROUND CONTROL	GC		•		•																							
LOCAL CONTROL	LC		•	•	•		•	•	•								•	•	•	•	•							
PROJECT CONTROL	PC					•																						
COORDINATOR/SUPERVISOR (TOWER)	CS(T)	•	•	•	•			•	•								•	•	•	•	•					•	•	•
FLIGHT DATA (GCA)	FB(G)																											
FINAL CONTROL (PAR)	FC(P)				•		•			•											•	•						
FINAL CONTROL (ACLS)	FC(S)				•		•			•											•	•						
ARRIVAL CONTROL (GCA)	AR(G)																											
COORDINATOR/SUPERVISOR (GCA)	CS(G)		•		•		•	•	•								•	•	•	•	•							
FLIGHT DATA (NON-RADAR)	FB(R)																											
APPROACH CONTROL (NON-RADAR)	AC(R)																											
DEPARTURE CONTROL (NON-RADAR)	DC(R)																											
COORDINATOR/SUPERVISOR (NON-RADAR)	CS(R)																											
FLIGHT DATA (RADAR)	FB(R)	•	•	•	•		•										•	•	•	•	•							
APPROACH CONTROL (RADAR)	AC(R)		•		•		•										•	•	•	•	•							
DEPARTURE CONTROL (RADAR)	DC(R)		•	•	•		•										•	•	•	•	•							
ARRIVAL CONTROL (RADAR)	AR(R)				•		•	•	•								•	•	•	•	•							
COORDINATOR/SUPERVISOR (RADAR)	CS(R)	•	•		•		•	•	•								•	•	•	•	•					•		
FLIGHT DATA (AIR RANGE)	FB(A)																											
MISSION CONTROL (AIR RANGE)	MC(A)																											
AREA CONTROL (AIR RANGE)	RC(A)																											
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)																											
WEATHER SERVICE	WX	•	•				•										•				•							
TRANSMIT LINE	TL	•	•				•																					
AIR TERMINAL	AT	•	•				•																					

KEY
 • REQUIRED
 ! REQUIRED IF AIR TERMINAL INCORPORATED

NOTE
 LINK REQUIRED BETWEEN EACH POSITION OF SAME TYPE IF MORE THAN ONE INSTALLED.

**ATCF EQUIPMENT STANDARD
 CLASS IVB**

PURPOSE: AIRCRAFT CONTROL
 FUNCTION: DISPLAYS

	AIRCRAFT LOCATION	AIRCRAFT IDENTIFICATION	AIRCRAFT POSITIONING
FLIGHT DISPATCHER (DP)			
FLIGHT DATA (TOWER) (FD(T))			
CLEARANCE DELIVERY (CD)			
GROUND CONTROL (GC)			
LOCAL CONTROL (LC)			
PROJECT CONTROL (PC)			
COORDINATOR/SUPERVISOR (TOWER) (CS(T))			
FLIGHT DATA (GCA) (FD(G))			
FINAL CONTROL (PAR) (FC(P))	•	•	•
FINAL CONTROL (LCLB) (FC(LB))	•	•	•
ARRIVAL CONTROL (GCA) (ARC(A))			
COORDINATOR/SUPERVISOR (GCA) (CS(G))			
FLIGHT DATA (NON-MADAN) (FD(N))			
APPROACH CONTROL (NON-MADAN) (AC(N))			
DEPARTURE CONTROL (NON-MADAN) (DC(N))			
COORDINATOR/SUPERVISOR (NON-MADAN) (CS(N))			
FLIGHT DATA (MADAN) (FD(M))			
APPROACH CONTROL (MADAN) (AC(M))	•	•	
DEPARTURE CONTROL (MADAN) (DC(M))	•	•	
ARRIVAL CONTROL (MADAN) (AR(M))	•	•	
COORDINATOR/SUPERVISOR (MADAN) (CS(M))			
FLIGHT DATA (AIR RANGE) (FD(A))			
MISSION CONTROL (AIR RANGE) (MC(A))			
AREA CONTROL (AIR RANGE) (AC(A))			
COORDINATOR/SUPERVISOR (AIR RANGE) (CS(A))			

KEY: • REQUIRED

**ATCF EQUIPMENT STANDARD
 CLASS IVB**

PURPOSE: FLIGHT PROGRESS DOCUMENTATION

FUNCTION: RECORD/DISPLAY

FLIGHT DISPATCHER	DP	●	●
FLIGHT DATA (TOWER)	FD(T)	●	●
CLEARANCE DELIVERY	CD	●	●
GROUND CONTROL	GC	●	●
LOCAL CONTROL	LC	●	●
PROJECT CONTROL	PC		
COORDINATOR/SUPERVISOR (TOWER)	CS(T)		
FLIGHT DATA (GCA)	FD(G)		
FINAL CONTROL (PAR)	FC(P)		
FINAL CONTROL (ACLS)	FC(S)		
ARRIVAL CONTROL (GCA)	AR(G)		
COORDINATOR/SUPERVISOR (GCA)	CS(G)		
FLIGHT DATA (NON-RADAR)	FD(N)		
APPROACH CONTROL (NON-RADAR)	AC(N)		
DEPARTURE CONTROL (NON-RADAR)	DC(N)		
COORDINATOR/SUPERVISOR (NON-RADAR)	CS(N)		
FLIGHT DATA (RADAR)	FD(R)	●	●
APPROACH CONTROL (RADAR)	AC(R)	●	●
DEPARTURE CONTROL (RADAR)	DC(R)	●	●
ARRIVAL CONTROL (RADAR)	AR(R)	●	●
COORDINATOR/SUPERVISOR (RADAR)	CS(R)		
FLIGHT DATA (AIR RANGE)	FD(A)		
MISSION CONTROL (AIR RANGE)	MC(A)		
AREA CONTROL (AIR RANGE)	NC(A)		
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)		

KEY: ● REQUIRED

**ATCF COMMUNICATIONS STANDARD
CLASS VA & VB**

PURPOSE: AIRCRAFT CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Dispatcher											As required to conform to basic ATCF configuration
Flight Data (Tower)											
Clearance Delivery											
Ground Control											
Local Control											
Coordinator/Supervisor (Tower)											
Flight Data (GCA)											
Final Control (PAR)											
Final Control (ACLS)											
Arrival Control (GCA)											
Coordinator/Supervisor (GCA)											
Flight Data (Non-Radar)											
Approach Control (Non-Radar)											
Departure Control (Non-Radar)											
Coordinator/Supervisor (Non-Radar)											

21 SEP 1988

Class VA & VB Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS VA & VB

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Data (Radar)											As required to conform to basic ATCF configuration
Approach Control (Radar)											
Departure Control (Radar)											
Arrival Control (Radar)											
Coordinator/Supervisor (Radar)											
Project Control	x			x				x	x	Project Primary	
Project Control	x			x				x	x	Project Discrete	Quantity as required to conform to site requirements
Project Control	x				x			x	x	Project Discrete	
Project Control	x					x		x	x	Project Discrete	
Project Control	x			x				x	x	Emergency (243.0)	
Project Control	x				x			x	x	Emergency (121.5)	
Flight Data (Air Range)											No Requirement
Mission Control (Air Range)	x			x				x	x	Mission Sector Primary	
Mission Control (Air Range)	x			x				x	x	Mission Discrete	Quantity as required to conform to site requirements
Mission Control (Air Range)	x				x			x	x	Mission Discrete	

21 SEP 1988

Class VA & VB Equipment Standards

**ATCF COMMUNICATIONS STANDARD
CLASS VA & VB**

PURPOSE: AIRCRAFT CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	NF				
Mission Control (Air Range)	x				x			x	x	Mission Discrete	Quantity as required to conform to site requirements
Mission Control (Air Range)	x			x				x	x	Emergency (243.0)	
Mission Control (Air Range)	x				x			x	x	Emergency (121.5)	
Mission Control (Air Range)	x			x				x	x	SAR (282.8)	ATCFs supporting defined SAR requirement
Area Control (Air Range)	x			x				x	x	Area Sector Primary	
Area Control (Air Range)	x			x				x	x	Project Discrete	Quantity as required to conform to site requirements
Area Control (Air Range)	x				x			x	x	Project Discrete	
Area Control (Air Range)	x					x		x	x	Project Discrete	
Area Control (Air Range)	x			x				x	x	Emergency (243.0)	
Area Control (Air Range)	x							x	x	Emergency (121.5)	
Area Control (Air Range)	x			x				x	x	SAR (282.8)	ATCFs supporting defined SAR requirement
Coordinator/Supervisor (Air Range)	x			x				x	x	Mission Sector Primary	
Coordinator/Supervisor (Air Range)	x			x				x	x	Mission Discrete	Quantity as required to conform to site requirements
Coordinator/Supervisor (Air Range)	x							x	x	Mission Discrete	
Coordinator/Supervisor (Air Range)	x							x	x	Mission Discrete	

21 SEP 1988

Class VA & VB Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS VA & VB

PURPOSE: AIRCRAFT CONTROL - Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Coordinator/Supervisor (Air Range)	x			x				x	x	Area Sector Primary	
Coordinator/Supervisor (Air Range)	x			x				x	x	Project Discrete	Quantity as required to conform to site requirements
Coordinator/Supervisor (Air Range)	x				x			x	x	Project Discrete	
Coordinator/Supervisor (Air Range)	x					x		x	x	Project Discrete	
Coordinator/Supervisor (Air Range)	x			x				x	x	Emergency (243.0)	
Coordinator/Supervisor (Air Range)	x				x			x	x	Emergency (121.5)	
Coordinator/Supervisor (Air Range)	x					x		x	x	SAR (282.8)	ATCFs supporting defined SAR requirement

**ATCF COMMUNICATIONS STANDARD
 CLASS VA & VB**

PURPOSE: VEHICLE CONTROL

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UNF (AM)	VHF (AM)	VHF (FM)	MF				
Flight Dispatcher											No Requirement
Flight Data (Tower)											
Clearance Delivery											
Ground Control											As required to conform to basic ATCF configuration
Local Control											No Requirement
Coordinator/Supervisor (Tower)											As required to conform to basic ATCF configuration
Flight Data (GCA)											No Requirement
Final Control (PAR)											As required to conform to basic ATCF configuration
Final Control (ACLS)											No Requirement
Arrival Control (GCA)											
Coordinator/Supervisor (GCA)											
Flight Data (Non-Radar)											
Approach Control (Non-Radar)											
Departure Control (Non-Radar)											
Coordinator/Supervisor (Non-Radar)											

21 SEP 1988

Class VA & VB Equipment Standards

ATCF COMMUNICATIONS STANDARD
CLASS VA & VB

PURPOSE: VEHICLE CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Flight Data (Radar)											No Requirement
Approach Control (Radar)											
Departure Control (Radar)											
Arrival Control (Radar)											
Coordinator/Supervisor (Radar)											
Project Control	x					x		x	x	Crew Vehicles	If airport access required by local directive
Flight Data (Air Range)											No Requirement
Mission Control (Air Range)	x			x				x	x	Aircraft Emergency	If range access required by local directive
Mission Control (Air Range)	x					x		x	x	Aircraft Emergency	
Mission Control (Air Range)	x							x	x	Aircraft Emergency	
Mission Control (Air Range)	x			x				x	x	Fire Emergency	
Mission Control (Air Range)	x							x	x	Fire Emergency	
Mission Control (Air Range)	x							x	x	Fire Emergency	
Mission Control (Air Range)	x							x	x	Fire Emergency	
Mission Control (Air Range)	x			x				x	x	Security	
Mission Control (Air Range)	x							x	x	Security	

**ATCF COMMUNICATIONS STANDARD
CLASS VA & VB**

PURPOSE: VEHICLE CONTROL-Continued

OPERATING POSITION	SYSTEM			FREQUENCY				TRANSMIT	RECEIVE	APPLICATION	REMARKS
	PRIMARY	STANDBY	EMERGENCY	UHF (AM)	VHF (AM)	VHF (FM)	HF				
Mission Control (Air Range)	x					x		x	x	Security	If range access required by local directive
Mission Control (Air Range)	x							x	x	Crew Vehicles	
Mission Control (Air Range)	x				x			x	x	Crew Vehicles	
Mission Control (Air Range)	x					x		x	x	Crew Vehicles	
Area Control (Air Range)											
Coordinator/Supervisor (Air Range)	x							x	x	Aircraft Emergency	No Requirement
Coordinator/Supervisor (Air Range)	x							x	x	Aircraft Emergency	If range access required by local directive
Coordinator/Supervisor (Air Range)	x							x	x	Aircraft Emergency	
Coordinator/Supervisor (Air Range)	x							x	x	Aircraft Emergency	
Coordinator/Supervisor (Air Range)	x							x	x	Fire Emergency	
Coordinator/Supervisor (Air Range)	x							x	x	Fire Emergency	
Coordinator/Supervisor (Air Range)	x							x	x	Fire Emergency	
Coordinator/Supervisor (Air Range)	x							x	x	Fire Emergency	
Coordinator/Supervisor (Air Range)	x							x	x	Security	
Coordinator/Supervisor (Air Range)	x							x	x	Security	
Coordinator/Supervisor (Air Range)	x							x	x	Security	
Coordinator/Supervisor (Air Range)	x							x	x	Security	

ATCF COMMUNICATIONS STANDARD
 ATCF CLASS VA & VB

PURPOSE: INTRA-FACILITY COORDINATION
 FUNCTION: INTERIOR LINKS

	BP	FB(T)	CB	GC	LC	PC	CS(T)	FB(G)	FC(P)	FC(S)	AR(G)	CS(G)	FB(I)	AC(I)	DC(I)	CS(I)	FB(R)	AC(R)	DC(R)	AR(R)	CS(R)	FB(A)	MC(A)	RC(A)	CS(A)	WX	TL	AT	
	FLIGHT DISPATCHER	FLIGHT DATA (TOWER)	CLEARANCE DELIVERY	GROUND CONTROL	LOCAL CONTROL	PROJECT CONTROL	COORDINATOR/SUPERVISOR (TOWER)	FLIGHT DATA (GCA)	FINAL CONTROL (PAR)	FINAL CONTROL (ACLS)	ARRIVAL CONTROL (GCA)	COORDINATOR/SUPERVISOR (GCA)	FLIGHT DATA (DDI-RADAR)	APPROACH CONTROL (DDI-RADAR)	DEPARTURE CONTROL (DDI-RADAR)	COORDINATOR/SUPERVISOR (DDI-RADAR)	FLIGHT DATA (RADAR)	APPROACH CONTROL (RADAR)	DEPARTURE CONTROL (RADAR)	ARRIVAL CONTROL (RADAR)	COORDINATOR/SUPERVISOR (RADAR)	FLIGHT DATA (AIR RANGE)	MISSION CONTROL (AIR RANGE)	AREA CONTROL (AIR RANGE)	COORDINATOR/SUPERVISOR (AIR RANGE)	WEATHER SERVICE	TRANSMIT LINK	AIR TERMINAL	
FLIGHT DISPATCHER	BP																												
FLIGHT DATA (TOWER)	FB(T)					•																							
CLEARANCE DELIVERY	CB																												
GROUND CONTROL	GC																												
LOCAL CONTROL	LC																												
PROJECT CONTROL	PC	•		•	•		•																						
COORDINATOR/SUPERVISOR (TOWER)	CS(T)																												
FLIGHT DATA (GCA)	FB(G)																												
FINAL CONTROL (PAR)	FC(P)																												
FINAL CONTROL (ACLS)	FC(S)																												
ARRIVAL CONTROL (GCA)	AR(G)																												
COORDINATOR/SUPERVISOR (GCA)	CS(G)																												
FLIGHT DATA (DDI-RADAR)	FB(I)																												
APPROACH CONTROL (DDI-RADAR)	AC(I)																												
DEPARTURE CONTROL (DDI-RADAR)	DC(I)																												
COORDINATOR/SUPERVISOR (DDI-RADAR)	CS(I)																												
FLIGHT DATA (RADAR)	FB(R)																												
APPROACH CONTROL (RADAR)	AC(R)																												
DEPARTURE CONTROL (RADAR)	DC(R)																												
ARRIVAL CONTROL (RADAR)	AR(R)																												
COORDINATOR/SUPERVISOR (RADAR)	CS(R)																												
FLIGHT DATA (AIR RANGE)	FB(A)	•			•	•	•	•					2	•	•	•	2	•	•	•	•	•	•	•	•	•	•	•	•
MISSION CONTROL (AIR RANGE)	MC(A)																2												
AREA CONTROL (AIR RANGE)	RC(A)																												
COORDINATOR/SUPERVISOR (AIR RANGE)	CS(A)	•																											
WEATHER SERVICE	WX																												
TRANSMIT LINK	TL																												
AIR TERMINAL	AT																												

PROVIDE ADDITIONAL LINKS AS REQUIRED TO CONFORM WITH BASIC ATCF CONFIGURATION CLASS I, II, III, IV

KEY
 • REQUIRED
 1 REQUIRED IF AIR TERMINAL INCORPORATED
 2 REQUIRED IF TERMINAL IFR SERVICE NOT PROVIDED FROM TOWER CAB

NOTE
 LINK REQUIRED BETWEEN EACH POSITION OF SAME TYPE IF MORE THAN ONE INSTALLED

Class VA & VB Equipment Standards

ATCF EQUIPMENT STANDARD
CLASS VA & VB

PURPOSE: AIRCRAFT CONTROL
FUNCTION: DISPLAYS

	AIRCRAFT LOCATION	AIRCRAFT IDENTIFICATION	AIRCRAFT POSITIONING
FLIGHT DISPATCHER (DP)			
FLIGHT DATA (TOWER) (FD(T))			
CLEARANCE DELIVERY (CD)			
GROUND CONTROL (GC)			
LOCAL CONTROL (LC)			
PROJECT CONTROL (PC)			
COORDINATOR/SUPERVISOR (TOWER) (CS(T))			
FLIGHT DATA (GCA) (FD(B))			
FINAL CONTROL (FAN) (FC(P))	1	1	1
FINAL CONTROL (FACTS) (FC(S))	1	1	1
ARRIVAL CONTROL (GCA) (AR(B))	1	1	
COORDINATOR/SUPERVISOR (GCA) (CS(A))			
FLIGHT DATA (NON-RADAR) (FD(M))			
APPROACH CONTROL (NON-RADAR) (AC(M))			
DEPARTURE CONTROL (NON-RADAR) (DC(M))			
COORDINATOR/SUPERVISOR (NON-RADAR) (CS(M))			
FLIGHT DATA (RADAR) (FD(N))			
APPROACH CONTROL (RADAR) (AC(N))	2	2	
DEPARTURE CONTROL (RADAR) (DC(N))	2	2	
ARRIVAL CONTROL (RADAR) (AR(N))	2	2	
COORDINATOR/SUPERVISOR (RADAR) (CS(N))			
FLIGHT DATA (AIR RANGE) (FD(A))			
MISSION CONTROL (AIR RANGE) (MC(A))	•	•	
AREA CONTROL (AIR RANGE) (AC(A))	•	•	
COORDINATOR/SUPERVISOR (AIR RANGE) (CS(A))			

KEY:
 • REQUIRED
 1 REQUIRED IF LOW APPROACH AND LANDING SERVICE INCORPORATED
 2 REQUIRED IF TERMINAL AREA CONTROL SERVICE INCORPORATED

