



U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

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Initiated by ATO-320

Subject: "FAR GUIDANCE MATERIAL"
Airport Radar Service Area (ARSA)

Date: 6/25/86
Initiated by: ATO-320

AC No: 90-88
Change:

1. PURPOSE. The purpose of this circular is to assist persons in complying with the requirements of Federal Aviation Regulations (FAR) pertaining to the airport radar service area (ARSA). It explains the ARSA and addresses some of the most frequently asked questions pertaining to ARSA's.

2. REFERENCE. FAR Parts 91, 71, 103, 105, and the Airman's Information Manual (AIM).

3. DISCUSSION:

a. The ARSA program was developed as the successor to the terminal radar service area (TRSA) following the recommendation of a National Airspace Review Task Group, a thorough review by the FAA, and over a year's confirmation at selected facilities. As a result of that review and confirmation, it was determined that ARSA would improve aviation safety, and simplify and standardize terminal air traffic control services at facilities that were then utilizing TRSA procedures. Thus, national implementation of ARSA, coupled with the replacement of TRSA, began on March 14, 1985.

b. One of the primary objectives in the design of the ARSA is standardization. All ARSAs are based on a concept of standard size and shape (see Appendix 1). Also unlike in TRSAs, all aircraft operating in ARSAs receive the same level of service. This standardization reduces possible confusion when pilots operate at different airports.

c. ARSA's are charted in blue on sectional and visual flight rules (VFR) terminal area charts. The FAA plans to propose designating ARSA's at selected public use and military airports throughout the United States.

4. DIMENSIONS. The dimensions of a particular ARSA and/or outer area may vary based on specific requirements, such as other regulatory airspace, international boundaries or topography. A standard ARSA is described below.

a. ARSA. An ARSA consists of that airspace within 5 nautical miles of an airport, extending from the surface to 4,000 feet above airport elevation, and that airspace within 10 nautical miles of that airport, extending from 1,200 feet AGL to the same 4,000-foot altitude cap as the inner circle.

b. OUTER AREA. While not regulatory airspace, an outer area is associated with each ARSA. The outer area will generally be that airspace within 20 nautical miles of the airport, extending from the lower limits of radar/radio coverage up to the ceiling of the approach control's delegated airspace, excluding the ARSA itself.

5. EQUIPMENT REQUIREMENTS. The only equipment required for an aircraft to operate within an ARSA is an operable two-way radio. However, it is desirable for aircraft operating within the air traffic control (ATC) system to have an operating transponder.

6. PILOT REQUIREMENTS. There are no special pilot license or rating requirements for operating in an ARSA.

7. FLIGHT PROCEDURES AND OPERATING RULES. Arrivals and departures to and from satellite airports within an ARSA must comply with FAA arrival and departure patterns (as published in the Airport/Facility Directory). NOTAM's pertaining to flights within an ARSA must be reviewed as part of preflight action required by FAR 91.5. Except in an emergency, all operations within an ARSA must be in compliance with ATC clearances and instructions.

a. IFR Flights. Aircraft operating on an instrument flight rules (IFR) clearance within an ARSA are required to operate in accordance with current IFR procedures.

b. VFR Flights. Unless otherwise authorized, all aircraft are required to establish and maintain two-way radio communications with the controlling facility while operating within an ARSA.

(1) Arrivals and Overflights.

(a) Arrivals to any airport/heliport within an ARSA and aircraft flying through an ARSA are required to establish two-way radio communications with the controlling facility prior to entering the ARSA.

(2) Departures.

(a) Departures from the primary airport are required to establish two-way radio communications with ATC prior to entering the ARSA.

(b) Aircraft departing satellite airports/heliports within the ARSA surface area shall establish two-way radio communication with ATC as soon as possible. Pilots must comply with approved FAA traffic patterns when departing these airports.

c. Ultralight Vehicle and Parachute Jump Operations. Ultralight vehicle and parachute jump operations may not be conducted within an ARSA except under the terms of an ATC authorization (FAR Parts 91, 103, and 105).

8. ATC SERVICES. Since this is a radar program, ARSA services will only be provided within radar/radio coverage. In the event of a radar outage, separation and sequencing of VFR aircraft will be suspended. The pilot will be advised that the service is not available and issued wind, runway information, and the time or place to contact the tower. ARSA services include the following:

a. Within the ARSA.

- (1) Radar sequencing of all aircraft arriving at the primary airport.
- (2) Standard IFR separation between IFR flights.
- (3) Between IFR and VFR aircraft - traffic advisories and conflict resolution so that radar targets do not touch or 500 feet vertical separation.
- (4) Between VFR aircraft - traffic advisories and as appropriate, "Safety Alerts."

b. Within the Outer Area. The same services are provided for aircraft operating within the outer area, as within the ARSA, when two-way communication and radar contact are established. While participation in the outer area is encouraged, it is not required.

c. Beyond the Outer Area.

- (1) Standard IFR separation.
- (2) Basic radar service.
- (3) Stage II/Stage III service, where appropriate.
- (4) Safety alerts, as appropriate.

d. Satellite and Secondary Airport Operations.

(1) In some locations an ARSA may overlap the airport traffic area of a secondary airport. In order to allow that control tower to provide service to aircraft, portions of the overlapping ARSA may be procedurally excluded when the secondary airport tower is in operation. Aircraft operating in these procedurally excluded areas will only be provided airport traffic control services when in communication with the secondary airport tower. ARSA service to aircraft inbound to these airports will be discontinued when the aircraft is instructed to contact the tower.

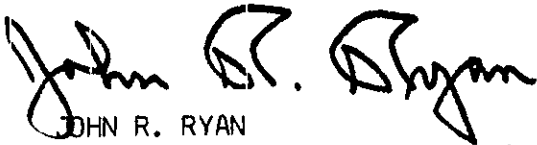
(2) Aircraft departing secondary controlled airports will not receive ARSA service until two-way communications and radar contact have been established.

e. ARSA services will be provided in the outer area unless the pilot declines or requests termination of the service.

f. Service provided beyond the outer area will be on a workload permitting basis and may be terminated by the controller if workload dictates.

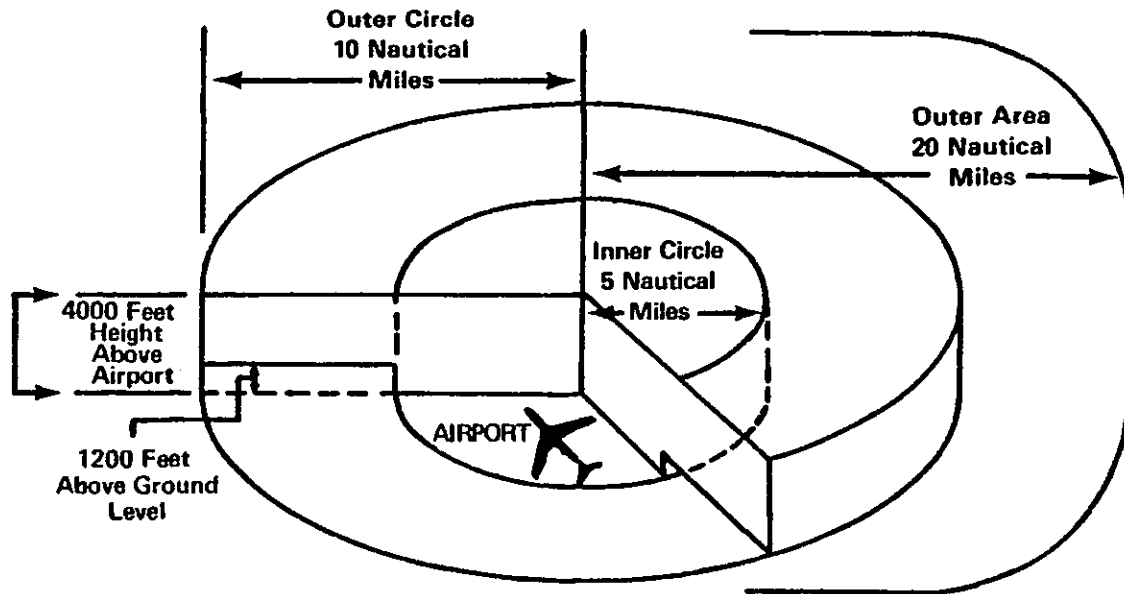
g. Some ARSA facilities shut down for portions of the night. When this occurs the effective hours of the ARSA will be the same as the operating hours of the serving facility. The hours of operation are published in the Airport/Facilities Directory and may be amended by NOTAM.

h. ARSA service to aircraft proceeding to a satellite airport will be terminated at a sufficient distance to allow time to change to the appropriate tower or advisory frequency.



JOHN R. RYAN
Director, Air Traffic Operations Service

Airport Radar Service Area (ARSA)



Services upon establishing two-way radio communication and radar contact:
 Sequencing Arrivals
 IFR/IFR Standard Separation
 IFR/VFR Traffic Advisories and Conflict Resolution
 VFR/VFR Traffic Advisories

Note: The normal radius of the Outer Area, will be 20nm, with some site specific variations.

IFR: Instrument Flight Rules
VFR: Visual Flight Rules