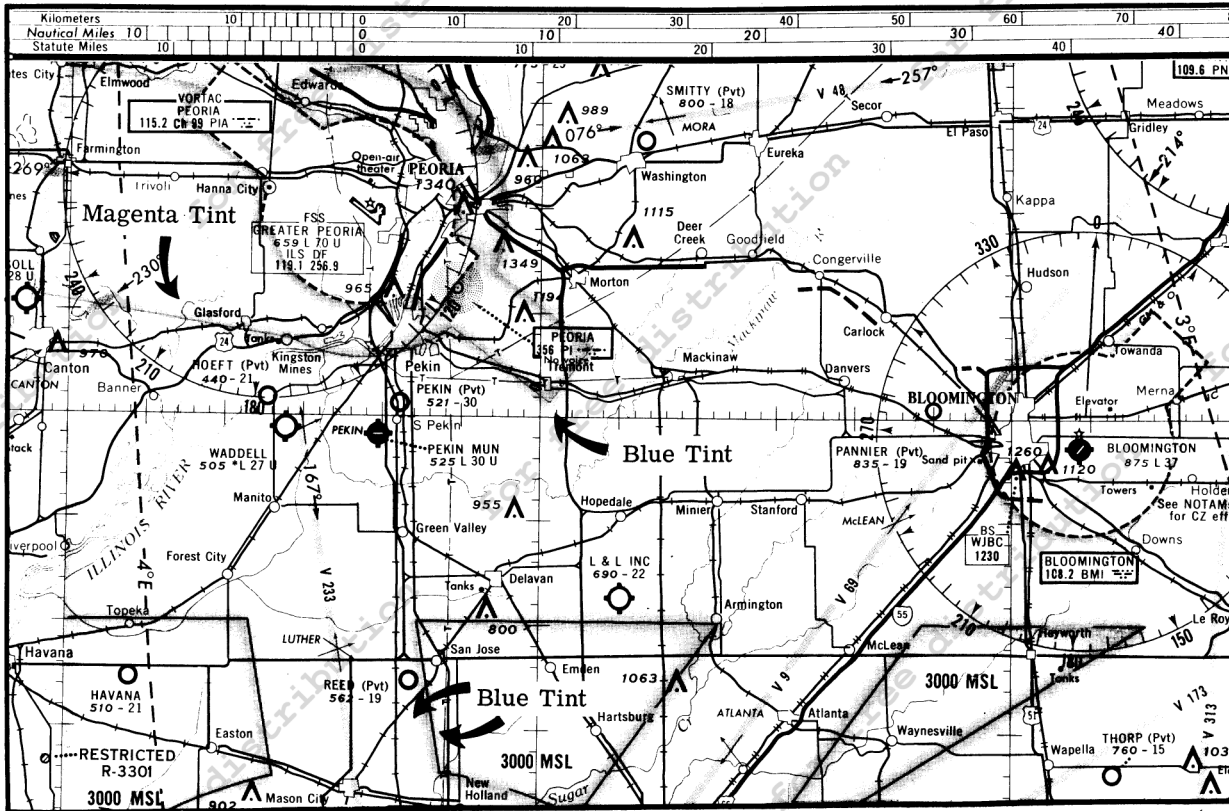


Department of Transportation
FEDERAL AVIATION ADMINISTRATION
VFR PILOT EXAM-O-GRAM* NO. 42

CONTROLLED AIRSPACE (SERIES 2)

Illustrations and brief descriptions of airspace in which certain controls are imposed on VFR flights, along with references to pertinent Regulations, are presented in Exam-O-Gram No. 41. In addition, questions relating to a segment of a selected aeronautical chart are posed with the answers omitted, to inspire complete study of controlled airspace. Those questions are restated and the correct answers are briefly discussed in this Exam-O-Gram as an additional service to the reader.



AIRPORT TRAFFIC AREA

1. IS THERE AN AIRPORT TRAFFIC AREA AT GREATER PEORIA AND BLOOMINGTON AIRPORTS?

There is an Airport Traffic Area at Greater Peoria, but not at Bloomington. Remember that Airport Traffic Areas exist only at airports where control towers are in operation. In checking the airport data box for Greater Peoria, you will note radio frequencies, indicating the existence of a control tower and therefore an Airport Traffic Area when the control tower is in operation. The lack of frequencies at Bloomington Airport indicates there is no tower, so there is no Airport Traffic Area at that airport. Two-way radio communications are normally required for takeoff and landing at Greater Peoria, but not at Bloomington during VFR weather.

2. IF YOU HAVE NO RADIO, AND THE CEILING AND VISIBILITY ARE UNLIMITED (CAVU), ARE YOU PERMITTED TO LAND AT GREATER PEORIA? AT BLOOMINGTON?

Yes. Because Greater Peoria has an Airport Traffic Area, radio communications are normally required for takeoff and landing. However, Regulations provide that if the radio becomes inoperative during flight, a landing may be made if the ceiling and visibility are at least 1,000 feet and 3 miles, after obtaining clearance to land by light signal (green light) from the tower.

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* Exam-O-Grams are non-directive in nature and are issued solely as an information service to individuals interested in Airman Written Examinations.

Similarly, an aircraft not equipped with radio may land if prior approval (by telephone) is obtained from the control tower. Inasmuch as Bloomington has no control tower, (therefore no Airport Traffic Area) there are no requirements for radio communications or prior approval for landing when the weather meets basic VFR minimums.

3. WHEN OVERFLYING GREATER PEORIA AIRPORT AT 4,000 FEET MSL IN CAVU WEATHER, ARE YOU REQUIRED TO MAINTAIN TWO-WAY RADIO COMMUNICATIONS WITH THE CONTROL TOWER? AT 3,500 FEET MSL?

At 4,000 feet MSL - no; at 3,500 feet MSL - yes. Airport Traffic Areas extend from the surface up to but not including 3,000 feet above the ground. Since the airport elevation is 659 feet, you would be above the Airport Traffic Area when at 4,000 feet MSL and would not be required to communicate with the tower. (If the flight visibility is less than 3 miles, however, communications would be required since this is also a Control Zone.) At 3,500 feet MSL, you would be in the Airport Traffic Area, since this altitude is within 3,000 feet of the ground, and you would be required to maintain two-way communications with the tower.

4. WHAT IS THE MAXIMUM AUTHORIZED SPEED FOR RECIPROCATING ENGINE AIRCRAFT WHEN APPROACHING GREATER PEORIA FOR LANDING?

Any time you are flying below 10,000 feet MSL, your indicated airspeed should be no more than 250 knots (288 mph). When within the Airport Traffic Area, your airspeed should be no more than 156 knots (180 mph).

CONTROL ZONE

1. WHAT WEATHER CONDITIONS MUST EXIST TO LAND OR TAKE OFF AT BLOOMINGTON WITHOUT OBTAINING A SPECIAL VFR CLEARANCE? AT GREATER PEORIA?

At least a 1,000 foot ceiling and 3 miles visibility at either of these airports. Note on the chart that both Bloomington and Greater Peoria airports lie within a Control Zone. A special VFR clearance is not required to operate within a Control Zone if the ceiling is at least 1,000 feet and the visibility is at least 3 miles. When the weather is below these minimums, but not less than one mile visibility, a special VFR clearance from ATC (Air Traffic Control) is required prior to operating in the Control Zone. (Visibility less than one mile requires an instrument clearance.)

2. WITH WHOM WOULD YOU COMMUNICATE TO RECEIVE A SPECIAL VFR CLEARANCE AT GREATER PEORIA? AT BLOOMINGTON?

With Peoria Tower at Greater Peoria, and Bloomington Radio at Bloomington Airport. To separate and coordinate IFR traffic and special VFR traffic, appropriate clearances are issued by the ATC (Air Traffic Control) facility serving each airport. At Greater Peoria these clearances are normally obtained through the control tower or approach control. Since a control tower is not located at Bloomington, clearances should be obtained by communicating with Bloomington Radio (controlled by Peoria FSS) who would obtain and relay the clearances from ATC.

3. AT WHAT ALTITUDE ARE YOU PERMITTED TO PRACTICE STALLS, SPINS, OR ACROBATICS OVER BLOOMINGTON AIRPORT?

Above 14,500 feet MSL only. Regulations prohibit the performance of those maneuvers within a Control Zone (as well as an airway). Bloomington Airport lies within a Control Zone and since this zone extends upward to the base of the Continental Control Area, those maneuvers would not be permitted below 14,500 feet over Bloomington Airport.

CONTROL AREA

1. WHEN OVER THE TOWN OF MACKINAW (center of the chart) AT 3,000 FEET ABOVE THE GROUND, ARE YOU WITHIN CONTROLLED AIRSPACE?

Yes. At first it may appear on the chart that Mackinaw does not lie within controlled airspace. However, remember that the outer limit of controlled airspace is shown by the darker and more definite edges of the tinted boundaries and the vanishing, or feathered edges show the direction of the controlled airspace. Since the darker edges of the nearby controlled airspace boundaries face away from Mackinaw, and the vanishing edges face toward Mackinaw, it is apparent that this town lies in a Control Area. This particular Control Area starts at 1,200 feet above the ground (boundaries in blue tint); therefore at 3,000 feet above the ground you would be within the Control Area.

2. WHEN FLYING IN THE IMMEDIATE VICINITY OF MACKINAW AT 15, 500 FEET MSL, WOULD YOU BE IN THE CONTROL AREA?

No. Control Areas extend from 700 feet or 1, 200 feet (as designated) above the ground, upward to the base of the Continental Control Area. Since the Continental Control Area starts at 14, 500 feet MSL, you would be in this overlying area (instead of the lower Control Area) when at 15, 500 feet MSL.

3. WHAT ARE THE VISIBILITY AND CLOUD CLEARANCE MINIMUMS WHEN FLYING AT 9, 500 FEET MSL IN THE IMMEDIATE VICINITY OF MACKINAW?

3 miles visibility and 1, 000 feet above or 500 feet below and 2, 000 feet horizontally from any cloud formation. We have established that the airspace surrounding Mackinaw between 1, 200 feet above the ground and 14, 500 feet MSL is a Control Area. Therefore, on a VFR flight at 9, 500 feet MSL, you must have at least 3 miles visibility and remain at least 1, 000 feet above or 500 feet below, and 2, 000 feet horizontally from clouds. (Above 10, 000 feet MSL anywhere, you must have at least 5 miles visibility and remain 1, 000 feet above or below clouds.)

CONTINENTAL CONTROL AREA

1. WHAT VISIBILITY IS REQUIRED TO FLY VFR AT 16, 500 FEET MSL ON V9 V69 AIRWAY?

At least 5 miles. The VFR visibility requirement is the same when at or above 10, 000 feet MSL or in the Continental Control Area (above 14, 500 feet MSL), regardless of whether you are on or off airways. Therefore, at 16, 500 feet MSL on V9 V69, a VFR flight requires a visibility of 5 miles. **

2. IF THERE ARE CLOUDS AT 17, 000 FEET MSL, HOW FAR BELOW THE CLOUDS SHOULD YOU FLY ON V9 V69 AIRWAY VFR?

At least 1, 000 feet. When on an airway below 10, 000 feet MSL, only 500 feet clearance beneath the clouds is required. However, at and above 10, 000 feet or in the Continental Control Area (above 14, 500 feet MSL) you are required to have at least 1, 000 feet clearance beneath the clouds regardless of whether on or off airways. **

3. IF YOU ARE OUTSIDE THE LATERAL LIMITS OF AN AIRWAY AT 15, 500 FEET MSL, WHAT ARE THE MINIMUM WEATHER CONDITIONS FOR VFR FLIGHT?

At least 5 miles flight visibility, since a flight at or above 14, 500 feet MSL, on or off an airway, is within the Continental Control Area. Additionally, you cannot fly VFR at less than 1, 000 feet above or 1, 000 feet below and 1 mile horizontally from any cloud formation. **

FEDERAL AIRWAYS

1. HOW FAR EAST OR WEST OF WADDELL AIRPORT (SOUTHWEST OF PEORIA) SHOULD YOU GO TO PRACTICE STALLS, SPINS, OR ACROBATICS?

At least 5 miles east or 3 miles west. Waddell Airport lies within the 8-mile width of V 233 airway and Regulations prohibit the performance of those maneuvers within a Federal Airway. To be outside the limits of the airway you must fly 5 miles east or 3 miles west of Waddell.

2. IF YOU ARE FLYING VFR AT 15, 500 FEET MSL ON V9 V 69 AIRWAY (SOUTHWEST OF BLOOMINGTON) WHAT ARE THE MINIMUM VISIBILITY AND CLOUD CLEARANCE REQUIREMENTS? AT 3, 000 FEET MSL?

Flight at 15, 500 feet MSL, on or off airways, is within the Continental Control Area, and above 10, 000 feet MSL, where you must have at least 5 miles visibility and remain at least 1, 000 feet above or 1, 000 feet below and 1 mile horizontally from any cloud formation. When flying at 3, 000 feet MSL on the airway you are in a Control Area and VFR flight requires that you have at least 3 miles visibility and remain at least 1, 000 feet above or 500 feet below and 2, 000 feet horizontally from any cloud formation.

** NOTE: Since the original printing of this Exam-O-Gram, the airspace at and above 18, 000 feet MSL in the area involved in this particular chart segment, has been designated Positive Control Area. Flights under Visual Flight Rules are prohibited above 18, 000 feet MSL in this area. (Northeast and north central U. S. A.)

3. WHAT MINIMUM VISIBILITY IS REQUIRED TO FLY FROM WADDELL AIRPORT TO PEKIN MUNICIPAL AIRPORT AT 1, 100 FEET MSL?

One mile visibility. Although a Federal airway lies between Waddell Airport and Pekin Municipal, and both airports are within the horizontal boundaries of a Control Area, the base of an airway or control area is never less than 700 feet above the surface. The elevation of the two airports and the terrain between them is approximately 500 feet, so at 1, 100 feet MSL, you would be beneath the controlled airspace. Therefore, this flight can be made at 1, 100 feet MSL under VFR with as little as 1 mile visibility.

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