

AOPA's Airspace Guide





Class B Airspace

Ref. AIM 3-2-3 and FAR 91.131

Description

- Surrounds certain large airports
- Within each Class B airspace area, there are multiple segments with different ceiling/floor altitudes.
 - Example: 70/30 = ceiling 7,000 msl, floor 3,000 msl

Requirements/Limitations

- ATC clearance
- Establish and maintain two-way communication prior to entering
- Mode C transponder (within 30 nm, up to 10,000 msl)
- Visibility: Three statute miles
- Cloud clearance: Clear of clouds
- Student pilot operations restricted

Question: What if the controller puts you on a heading that will take you into the airspace, but doesn't actually tell you that you're cleared into the airspace?

Answer: You need to hear the words "cleared into the Class B airspace," or equivalent. If you don't, be sure to ask the controller before you enter the airspace.



Class C Airspace

Ref. AIM 3-2-4 and FAR 91.130

Description

- Surrounds certain medium-sized airports
- Typically 20 nm in diameter
- Generally includes two segments with different floor/ceiling altitudes
- Usually extends to 4,000 agl

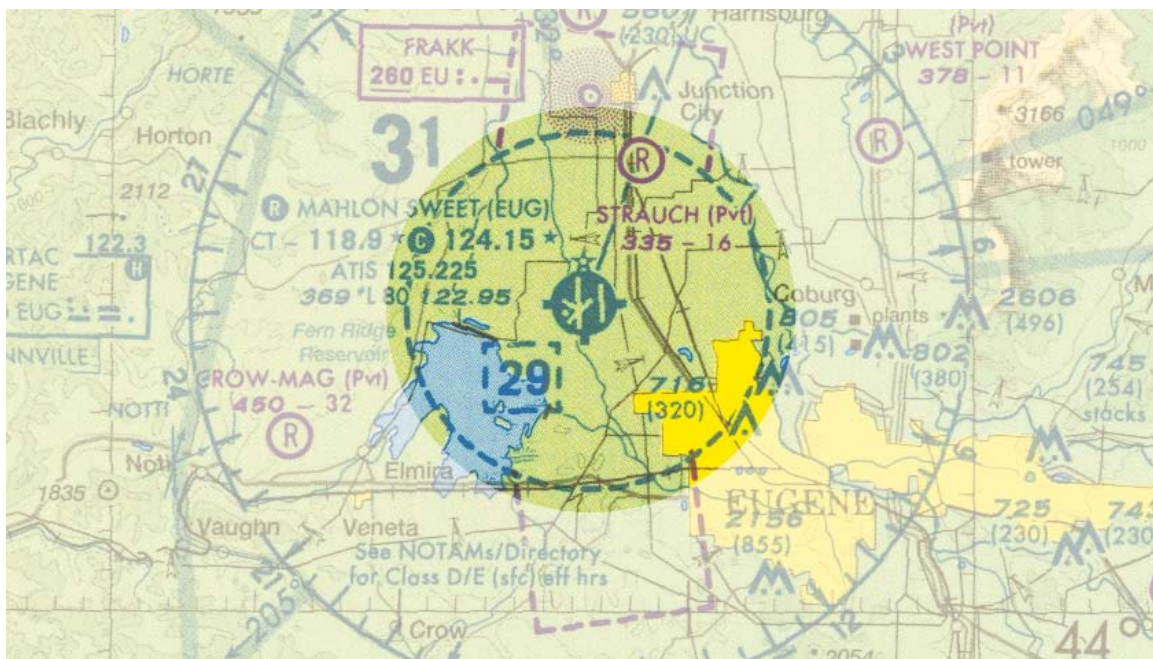
Requirements/Limitations

- Establish and maintain two-way communication prior to entering
- Mode C transponder
- Visibility: Three statute miles
- Cloud clearance:
 - 500 feet below
 - 1,000 feet above
 - 2,000 feet horizontal

Question: You're departing from a small nontowered field three miles from the primary airport in Class C airspace. Are you required to contact ATC prior to takeoff?

Answer: Follow any procedures specified in the Airport/Facility Directory: In many cases, you may be able to contact ATC from the ground. Generally, however, you are only required to contact ATC as soon as practical after departure.





Class D Airspace

Ref. AIM 3-2-5 and FAR 91.129

Description

- Surrounds smaller towered airports
- Typically 10 nm in diameter
- Ceiling generally 2,500 agl
- Usually reverts to a Class E surface area when the tower is closed
- May include Class E surface area extensions

Requirements/Limitations

- Establish and maintain two-way communication
- Visibility: Three statute miles
- Cloud clearance:
 - 500 feet below
 - 1,000 feet above
 - 2,000 feet horizontal

Question: Is there a speed limit within Class D airspace?

Answer: Yes. Below 2,500 agl and within four nautical miles of the primary airport, aircraft are limited to 200 knots indicated airspeed.



Class E Airspace, Transition Area (700 AGL)

Ref. AIM 3-2-6(e)(3)

Description

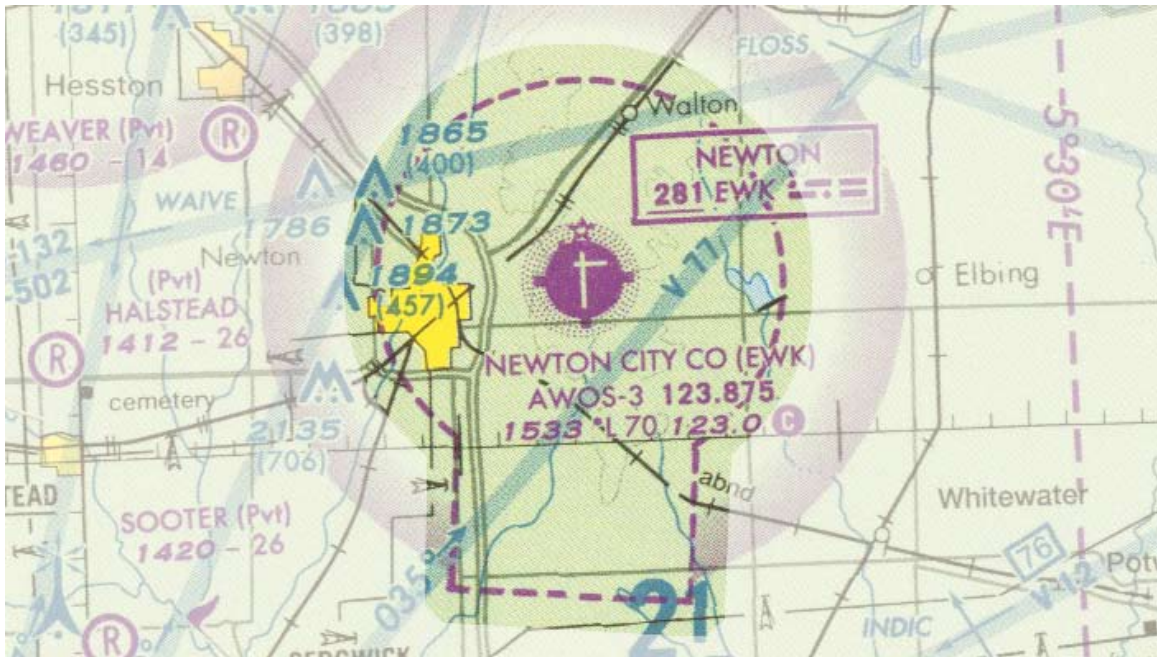
- Surrounds many nontowered airports
- Extends Class E airspace downward to accommodate IFR arrivals

Requirements/Limitations

- Visibility: Three statute miles*
 - Cloud clearance*:
 - 500 feet below
 - 1,000 feet above
 - 2,000 feet horizontal
- (*Below 10,000 msl)

Question: What is the purpose of a Class E transition area?

Answer: Class E transition areas exist to help traffic transition to or from the terminal or en route environment.



Class E Airspace, Surface Area

Ref. AIM 3-2-6(e)(1) and FAR 91.127

Description

- Around some airports, Class E airspace begins at the surface, rather than the normal 700 or 1,200 agl
- Class D airports with part-time towers usually become Class E surface areas when the tower is not in operation

Requirements/Limitations

- Visibility: Three statute miles*
 - Cloud clearance*:
 - 500 feet below
 - 1,000 feet above
 - 2,000 feet horizontal
- (* Below 10,000 msl)

Question: What determines whether the airspace around an airport may be designated a Class E surface area?

Answer: The airport must have either a weather observer or a functional automated weather observing system (AWOS or ASOS).



TRSA (Terminal Radar Service Area)

Ref. AIM 3-5-6 and 4-1-17

Description

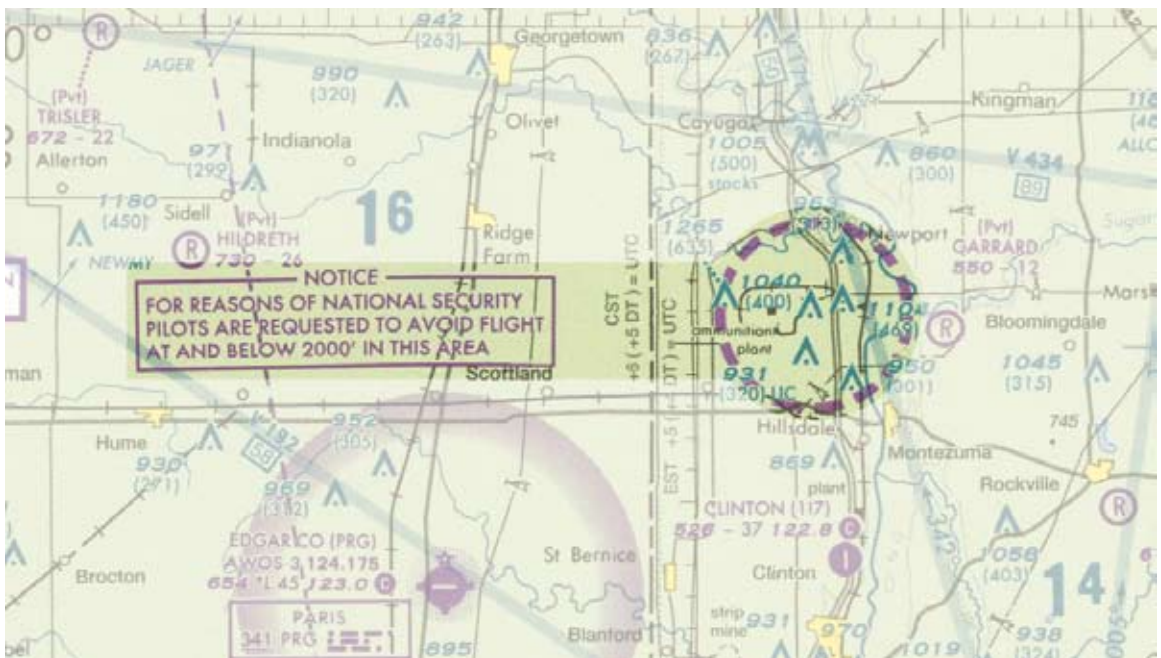
- Surrounds Class D airports with expanded ATC radar services

Requirements/Limitations

- Transponder and two-way communication for participating aircraft
- Pilots not required to participate
- Rules for Class D airspace within apply regardless of pilot participation with TRSA radar services

Question: Where do TRSAs fit in the national airspace classification system?

Answer: TRSAs are “leftovers” from the previous (pre-1993) airspace classification system. As a general rule, they exist at airports whose traffic load requires enhanced radar service, but that aren’t busy enough to justify Class C airspace.



NSA

(National Security Area)

Ref. AIM 3-5-7

Description

- Established around areas requiring special security precautions

Requirements/Limitations

- Pilots are requested to avoid flight below a specified altitude within the NSA
- Flight may be temporarily restricted or prohibited by notam

Question: Where might you expect to find an NSA?

Answer: NSAs can be established where a need for greater security exists, but are most often seen around government/military installations, power plants, and factories.



MOA

(Military Operations Area)

Ref. AIM 3-4-5

Description

- Established to allow military training activities

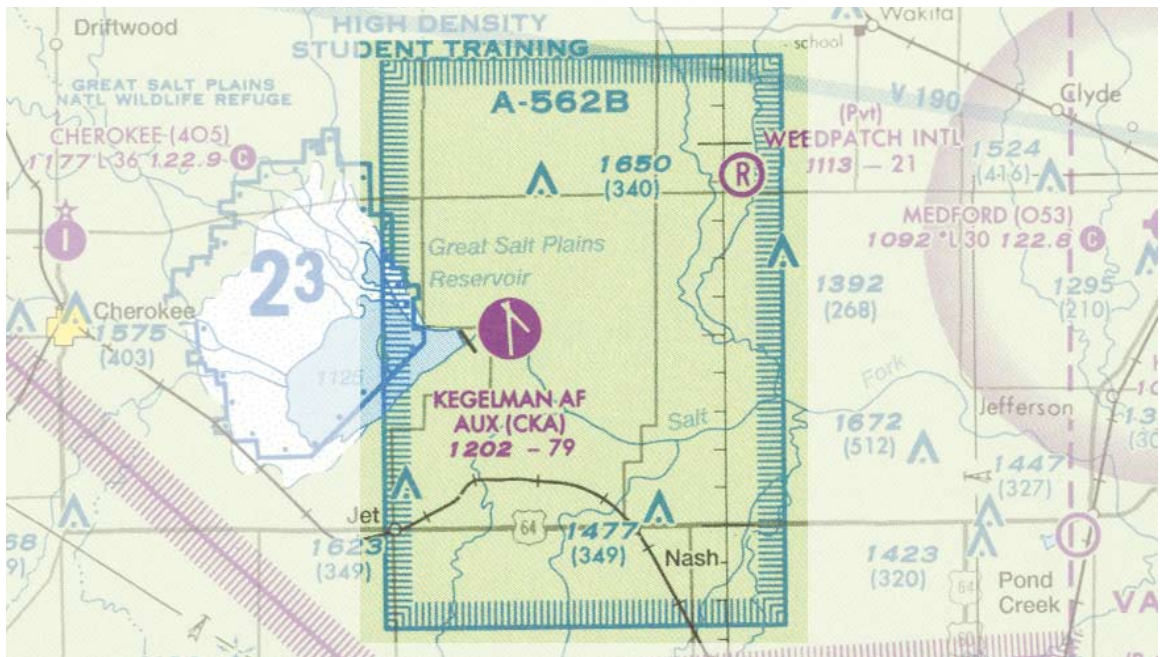
Requirements/Limitations

- VFR pilots may fly through active MOAs, but are advised to exercise extreme caution
- It's a good idea to check with the controlling ATC facility (noted on sectional charts) for MOA status prior to entering an MOA

Question: What kinds of military flight operations take place within MOAs?

Answer: High-speed flight, aerobatic maneuvers, and low-level flight can all be expected. In certain MOAs, "lights out" night training is also permitted.

For more information, view ASF's Mission: Possible online course at www.aopa.org/asf/online_courses.



Alert Area

Ref. AIM 3-4-6

Description

- Established in areas with a high volume of pilot training or unusual type of aerial activity

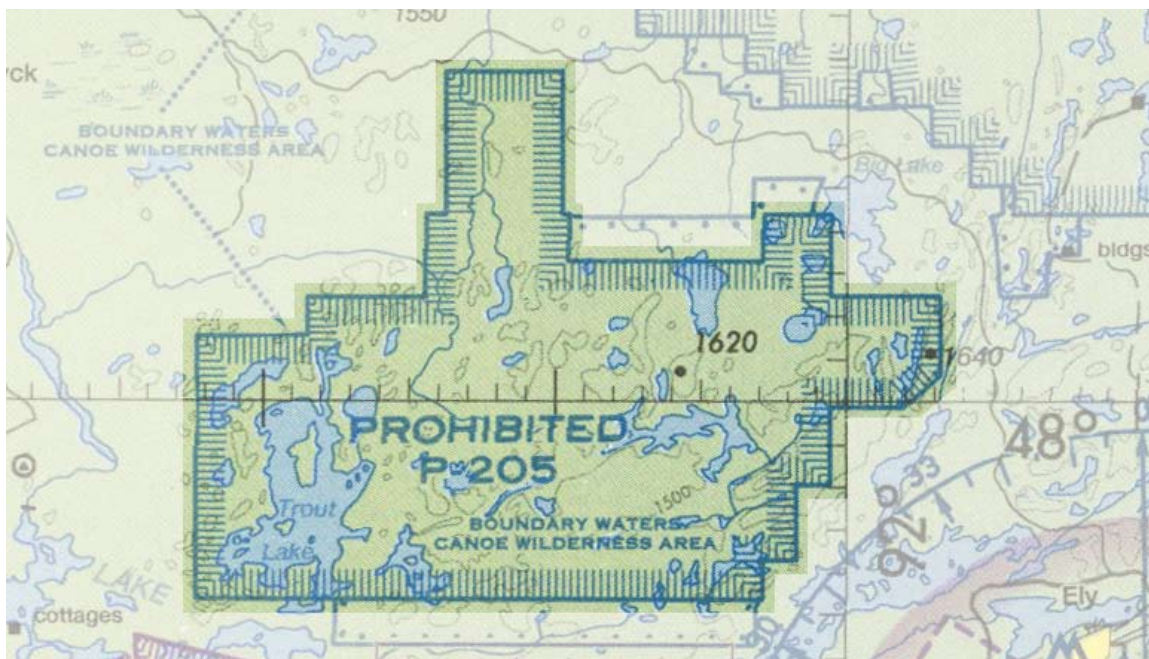
Requirements/Limitations

- Pilots advised to be particularly vigilant in scanning for traffic

Question: Do I need to contact ATC prior to entering an Alert Area?

Answer: No ATC contact/clearance is required to enter an Alert Area.

For more information, view ASF's Mission: Possible online course at www.aopa.org/asf/online_courses.



Prohibited Area

Ref. AIM 3-4-2

Description

- Established for security reasons
 - Examples: Camp David (P-40), Crawford, TX (P-49)

Requirements/Limitations

- Flight within a Prohibited Area is not permitted

Question: How much distance should I maintain from Prohibited Areas?

Answer: It's a good idea to steer well clear of Prohibited Areas. Allow at least a couple of miles to account for navigation error and variances between GPS and ATC radar positions.

For more information, view ASF's Mission: Possible online course at www.aopa.org/asf/online_courses.



Restricted Area

Ref. AIM 3-4-3

Description

- Separates civilian traffic from potentially hazardous military activities

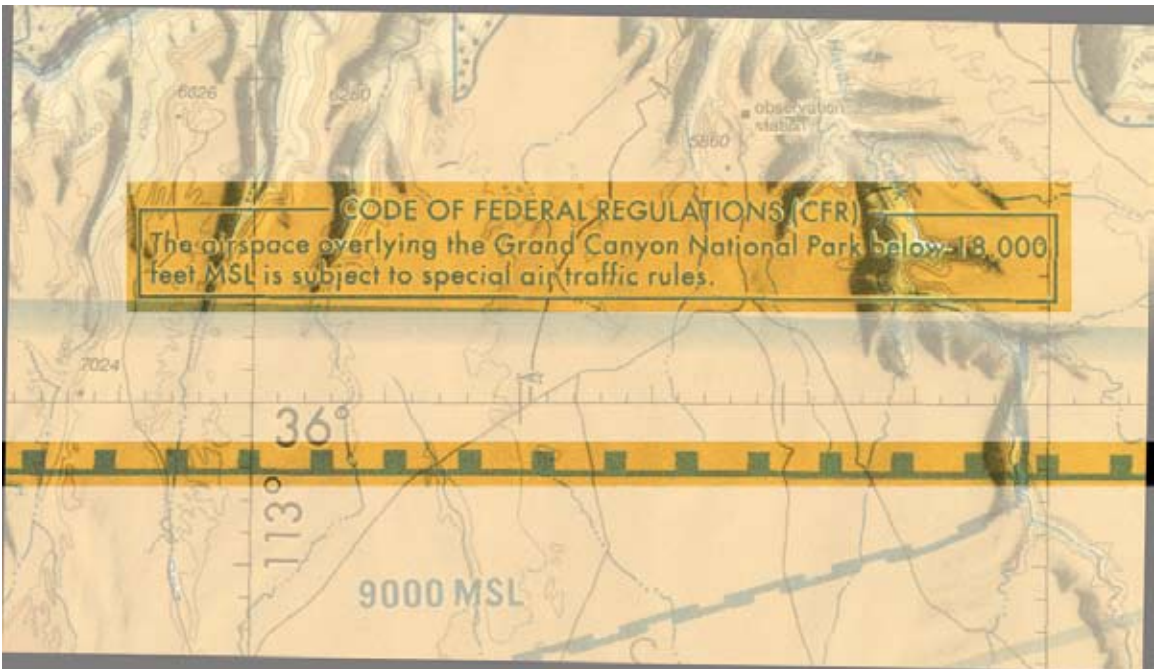
Requirements/Limitations

- Flight through an active Restricted Area is not permitted
- Check with the controlling ATC facility (noted on sectional charts) for current status prior to entering

Question: May you legally fly through an inactive Restricted Area?

Answer: Yes, but you should be certain to contact the controlling ATC facility for current status before entering the airspace.

For more information, view ASF's Mission: Possible online course at www.aopa.org/asf/online_courses.



SFAR Area

(Special Federal Aviation Regulations)

Description

- Depicts airspace subject to special regulation
- Examples: Grand Canyon; Washington, D.C. FRZ

Requirements/Limitations

- As specified by SFAR
- For operating rules refer to the chart legend, or the SFAR section at the beginning of FAR Part 91

Question: What kinds of procedures exist for flying within SFAR areas?

Answer: Procedures vary. In the Grand Canyon, for example, special transition routes and altitude rules apply.



TFR

(Temporary Flight Restriction)

Ref. AIM 3-5-3

Description

- Most TFRs are not charted, although some longer-term TFRs are

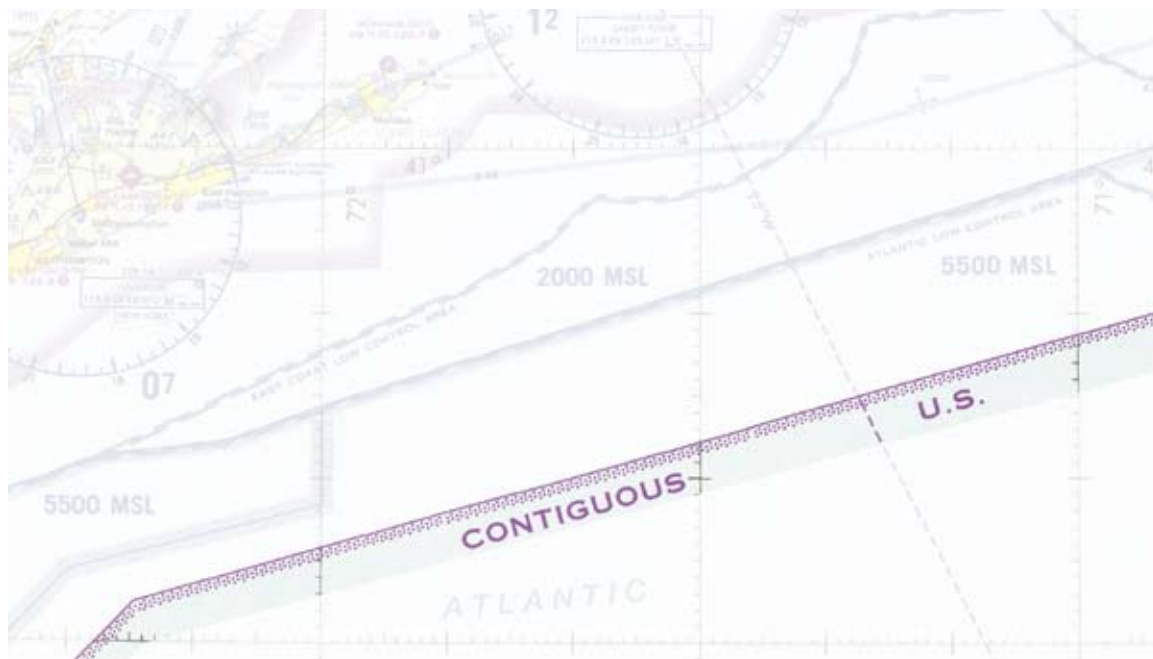
Requirements/Limitations

- As specified by notam

Question: How much notice is given prior to the establishment of a TFR?

Answer: In many cases, TFRs are established with little or no notice. Get a thorough Flight Service or DUATS briefing just prior to flight and call for updates when airborne. AOPA members can use the Real-Time Flight Planner to plan routes around current and upcoming TFRs.

Download the Real Time Flight Planner from AOPA's web site at www.aopa.org/flight_planner/intro.html.



Contiguous U.S. ADIZ (Air Defense Identification Zone)

Ref. AIM 5-6-1

Description

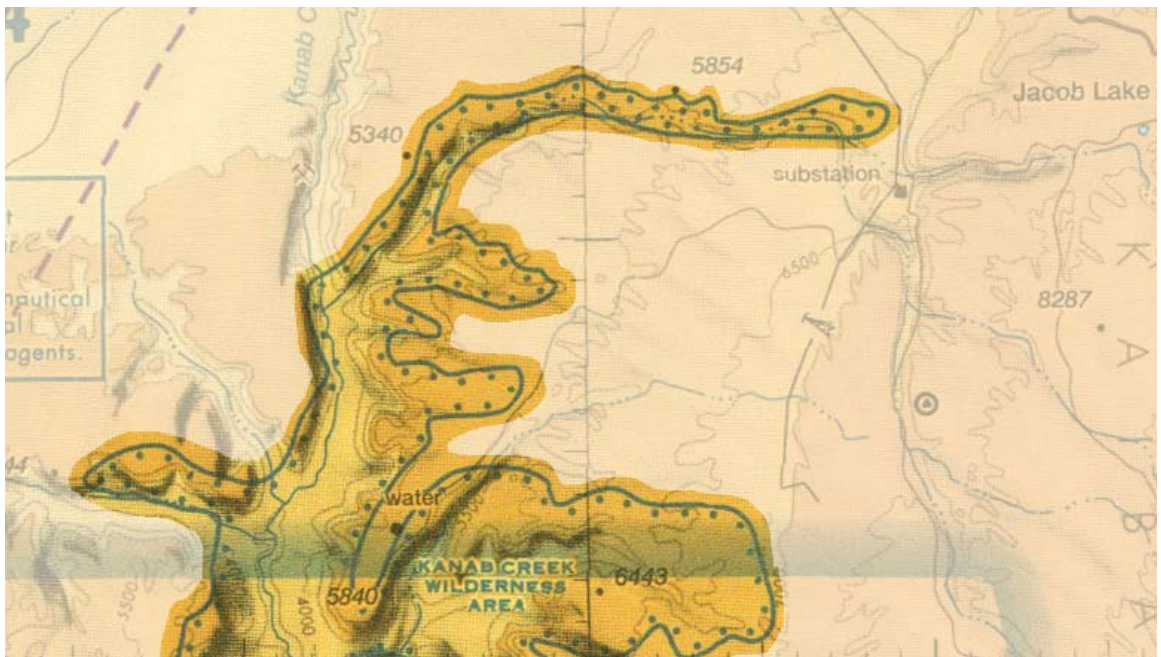
- Surrounds the nation's eastern, southern, and western borders

Requirements/Limitations

- IFR or DVFR (Defense VFR) flight plan
- Discrete transponder code
- DVFR aircraft must make position reports prior to entering

Question: What is a DVFR flight plan, and why is one required for VFR aircraft that enter the Contiguous U.S. ADIZ?

Answer: A normal VFR flight plan is not transmitted to ATC: It exists for search-and-rescue purposes only. A DVFR (Defense VFR) flight plan is transmitted to ATC, letting controllers know that the aircraft will be approaching the ADIZ under VFR.



Special Conservation Area

Ref. AIM 7-4-6

Description

- Surrounds many national parks, wildlife refuges, etc.

Requirements/Limitations

- Pilots requested to avoid flight below 2,000 agl in these areas

Question: Is it legal to operate below 2,000 agl within a Special Conservation Area?

Answer: Yes. The minimum altitude is voluntary, though we urge pilots to be “good neighbors” and comply with the request.



Warning Area

Ref. AIM 3-4-4

Description

- Extends outward from 3 nm off the coast
- Warns pilots of potentially hazardous activities

Requirements/Limitations

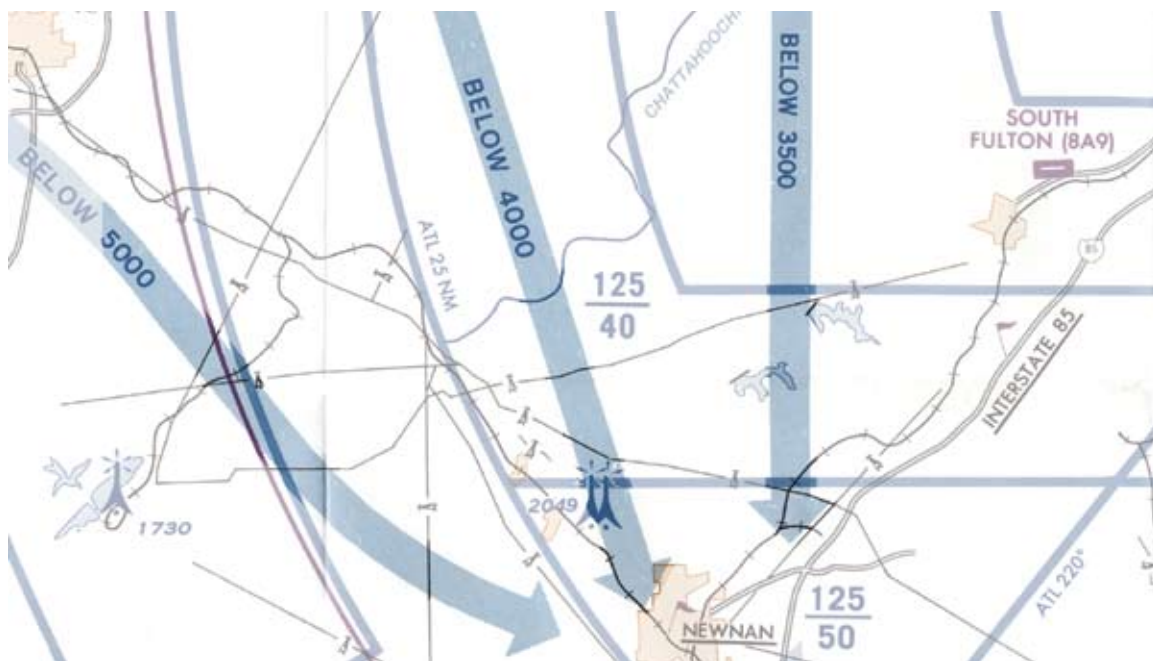
- VFR flight through active Warning Areas is permitted, though not recommended

Question: Are you required to contact ATC before entering a Warning Area?

Answer: No, but it is a good idea to contact the controlling ATC facility for status information prior to entry. Active Warning Areas can be dangerous to general aviation aircraft.

For more information, view ASF's Mission: Possible online course at www.aopa.org/asf/online_courses.





VFR Flyways

Ref. AIM 3-5-5

Description

- Helps transition VFR traffic into, out of, through, or near Class B airspace
- ATC clearance not required

Requirements/Limitations

- Mode C transponder
- Pilot must still comply with requirements for other airspace entered
- Depicted on the back of terminal area charts

Question: Will a VFR flyway take you into Class B airspace?

Answer: No. VFR flyways are general paths used by pilots flying into, out of, through, or near terminal airspace to avoid Class B airspace. Remember, though, that they may take you through other areas with their own requirements (Class D airspace, for example).



VFR Transition Routes

Ref. AIM 3-5-5

Description

- Used by ATC to route VFR traffic through Class B airspace
- Depicted on terminal area charts

Requirements/Limitations

- ATC Clearance
- Mode C transponder
- Adherence to published route and ATC instructions

Question: How do I ask ATC permission if I want to use a VFR transition route?

Answer: On initial contact, you'll want to notify ATC of your position, altitude, route name desired, and direction of flight.



Differentiates Floors of Class E Airspace

Ref: NACO Chart User's Guide

Description

- Differentiates floors of airspace greater than 700 feet above the surface
- When the ceiling is less than 18,000 msl, the value, prefixed by the word "ceiling," will be shown along the limits of the airspace boundaries

Requirements/Limitations

- Not Applicable

Question: Where am I likely to encounter differences in Class E airspace depicted by this symbol?

Answer: Typically in areas of high terrain, like the Grand Canyon, for example, and off the east and west coasts of the United States.



IFR Routes

Ref: NACO Chart User's Guide

Description

- Only depicted on VFR terminal area charts
- Shows arrival and departure routes and altitudes of IFR traffic into and out of the terminal area of Class B airspace

Requirements/Limitations

- Not applicable

Question: I'm a VFR pilot, so why do I need to know about IFR routes?

Answer: The IFR routes depicted on the VFR terminal area charts should alert VFR pilots operating in terminal areas of arriving or departing IFR traffic. Maintain extra vigilance when flying through or near these routes.



Mode C veil

Ref: AIM 3-2-3

Description

- Mode C veils exist within 30 nm of most Class B airports. (A list of these airports is available in FAR 91, Appendix D, Section 1)
- Some Class B airspaces extend beyond the Mode C veil

Requirements/Limitations

- Mode C transponder
- Certain exemptions apply. Refer to FAR 91.215

Question: My airport is based within a Mode C veil. If my transponder fails while outside the veil, can I get back in?

Answer: When flying into a Mode C veil area with an inoperative transponder, the pilot needs to telephone the appropriate ATC facility having jurisdiction over the concerned airspace and request permission at any time to make the flight. Upon agreeing to conditions (including direction of flight and altitude), the pilot will be given a code number that he or she will mention to the controller upon initial radio contact.



Military Training Routes (MTR)

Ref: AIM 3-5-2

Description

- MTRs prefixed with the letters 'IR' are for IFR flights
- MTRs prefixed with the letters 'VR' are for VFR flights
- MTRs with a letter suffix (i.e., A, B, etc.) denote an alternate route
- MTRs with four numbers denote routes flown at 1,500 agl and below
- MTRs with three numbers denote routes flown above 1,500 agl

Requirements/Limitations

- Not Applicable

Question: What exactly is a military training route?

Answer: A military training route, or MTR, is used by the military for conducting low-altitude, high-speed flight training. Typically the routes above 1,500 agl are flown under IFR, and the routes below 1,500 are flown under VFR. Contact flight service for MTR activity that might affect your route of flight.

For more information, view ASF's Mission: Possible online course at www.aopa.org/asf/online_courses.