

Airspace

Types of Airspace

- Class A (not a concern 18,000 - 60,000 ft)
- Class B
- Class C
- Class D
- Class E
- Class G (uncontrolled)
- Special Use Airspace
 - Prohibited
 - Restricted
 - Warning
 - Alert
 - MOA (Military Operating Area)
- Skyvector.com – Sectional charts online
- FAA sectional charts (https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/vfr/)

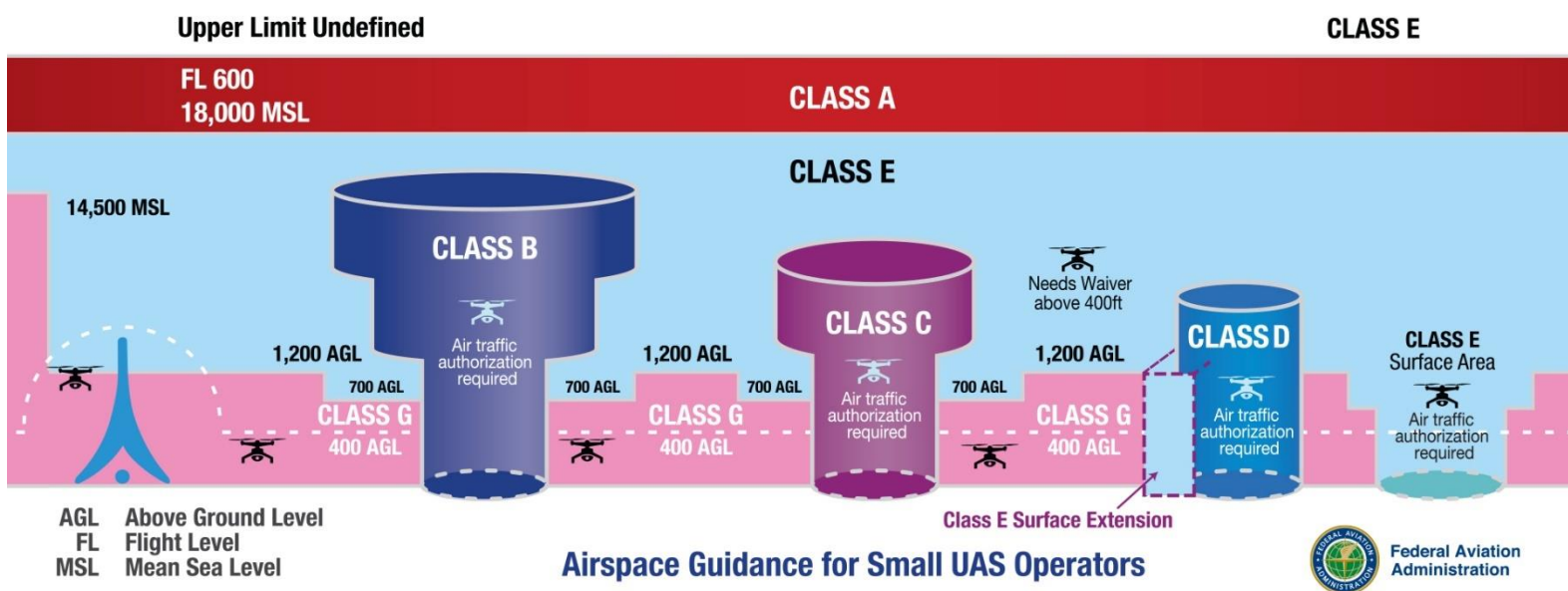
Terms to know

- MSL – Mean Sea Level is the altitude above sea level
- AGL – Above Ground Level is just that, how high above the ground
- Altitudes on the charts are given in feet. When addressing **Flight Levels (FL)**, that number will be given with the last 2 digits gone. For example, FL180 is equivalent to 18,000 feet
- VFR - Visual Flight Rule
- IFR – Instrument Flight Rule

The border of the sectional chart will have additional information on the Special Use Airspace such as the name, altitude, time of use, controlling agency, and frequencies used.

To get a single sectional chart in SkyVector.com, click on the button in the upper right corner that has the name of the chart for which you are viewing. You will then be able to see the border information.

Also, as a good practice check the B4Ufly app and 1800wxbrief.com before any operation.



Class B Airspace (bravo)

- Setup around busy airports. Think B for Big city airports like Denver and Phoenix.
- Solid Blue lines around an airport.
- Generally, from the surface (SFC) to 10,000 ft MSL.
- Contains an inner **surface** area and will have at least 2 outer areas. Each airport will have different areas and altitudes for class B airspace.
- Need approval to fly in Class B

Class C Airspace (Charlie)

- Setup around cities. Think C for City airports like Billings and Tucson.
- Solid Magenta lines
- Have an operational control tower and IFR operations.
- Generally, from the SFC up to 4,000 ft AGL around the airport
- Generally, has an inner circle with a radius of 5 nautical miles and an outer circle with a radius of 10 NM and usually from 1200 to 4000 ft AGL. There is a Mode C veil which UAS is not concerned with.
- Need the approval to fly in Class C

Class D Airspace (Delta)

- Setup around small cities with control towers like Casper and Cheyenne
- Blue dotted circle
- Always starts at the SFC up to the blue number in Brackets [26]
- A bracketed number with a negative sign [-26] means the airspace starts at the SFC and goes up to 2600 ft in this case but does not include 2600 ft. It changes to the overlying airspace. Example Centennial airport south of Denver
- Generally, from the SFC up to 2500 ft AGL around the airport
- Has an operational control tower. Use Chart Supplement to see hours of operation and airspace class when the tower is closed (either E or G)

Class E Airspace (Echo)

- Everything that is controlled but not A, B, C, or D.
- Several Types
 - At the surface. Indicated by dotted magenta lines. Examples are Sheridan and Laramie. Need the Authorization to fly unless they are extension airspace near (not around/over) an airport like Gillette. Only Class E airspace where you
 - Starting at 700 ft AGL. Thick, fuzzy magenta line. Unless there are other airspaces around this area, the space from the surface up to (not including) 700ft AGL is Class G airspace.
 - Starting at 1200 ft AGL. Not on the charts explicitly. The rest of the airspace is not encompassed by any type of controlled airspace. From the surface to 1200 ft AGL is Class G

Class G Airspace (Golf)

- Everything that is not A, B, C, D, or E.
- Uncontrolled airspace
- No authorization is required to fly drones

Special Use Airspace – FAA definition. Special use airspace (SUA) consists of that airspace wherein activities must be confined because of their nature, or wherein limitations are imposed upon aircraft operations that are not a part of those activities, or both.

Types

- Prohibited Areas
 - On a sectional chart listed by a **P** followed by a number (P-40) and surrounded by blue hash marks.
 - No flights allowed
 - Established for security or other reasons associated with the national welfare. Like Capitol Bldg.
- Restricted Areas
 - On a sectional chart listed by an **R** followed by a number (R-4009) and surrounded by blue hash marks.
 - Areas where flights are hazardous to non-participating aircraft.
 - Not necessarily closed to flights.
 - Can contact the controlling agency to get specific permission.
- Warning Areas
 - On a sectional chart listed by a **W** followed by a number (W-50) and surrounded by blue hash marks.
 - A warning area is airspace of defined dimensions, extending from three nautical miles outward from the coast of the U.S., that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both.
- Alert Areas
 - On a sectional chart listed by an **A** followed by a number (A-623) and surrounded by magenta hash marks.
 - Areas that may contain a high volume of pilot training or an unusual type of aerial activity.
 - You can fly there but need to exercise caution and avoid collision with other aircraft.
- Military Operations Area (MOA)
 - On a sectional chart listed by MOA and outlined by magenta hash marks.
 - Each pilot is responsible for collision avoidance.
 - Check the border of the sectional chart to see when the area is active.

Military Training Route (MTR) - Used to conduct low-altitude, high-speed flight training.

- Identified by either VR or IR followed by a 3- or 4-digit number.
 - 3-digit routes are above 1500 ft AGL with at least one segment
 - 4-digit routes are below 1500 ft AGL

Temporary Flight Restrictions (TFR) all aircraft.

- FAA link - <https://tfr.faa.gov/tfr2/list.html>
- Flights are prohibited. Not on sectional charts
- Some of the reasons are:
 - Large people gatherings like sporting events (30,000+)
 - No aviation 1 hour before or after even, 3 SM and 3000ft AGL
 - To provide a safe environment for the operation of disaster relief
 - To prevent unsafe congestion of sightseeing aircraft above an incident/event
 - To protect the President, Vice President, or other public figures (VIP)

NOTAMS

- NOTAMs are a notice containing information concerning the establishment, condition, or change in any aeronautical facility, service, procedure, or hazard. It contains information not known sufficiently in advance to publicize by other means. Examples: natural disasters, large scale public events.
- FAA link - <https://notams.aim.faa.gov/notamSearch/>