

## **Airspace**

All of the open sky covering the United States — from less than an inch off the ground all the way to outer space — is part of America's airspace.

### **From A to G**

All of this airspace is divided into several standardized types, ranging from A through G — with A being the most restrictive and G the least restrictive.

Each type of airspace has its own required level of air traffic control services and its own minimum requirements for pilot qualifications, aircraft equipment, and weather conditions.

In addition, there is other airspace reserved for special purposes called special use airspace (SUA).

### **Controlled and Uncontrolled**

Within the United States, airspace is classified as either controlled or uncontrolled. Controlled airspace will have specific defined dimensions (e.g. altitude ranges or vertical boundaries, and an applicable surface area or horizontal boundaries).

Within controlled airspace, air traffic control (ATC) services are provided to all pilots operating under instrument flight rules (IFR), because they are flying solely by reference to instrument indications. The services also are provided to some pilots operating under visual flight rules (VFR) even though they are using points on the ground to navigate.

### **Class A**

Class A airspace covers the entire United States and lies between 18,000 feet and 60,000 feet mean sea level (msl). All of the jetways (jet routes) are in Class A airspace. Class A airspace is primarily used by jets and airliners traveling over long distances between major cities.

All flights in Class A airspace are conducted under instrument flight rules (IFR); therefore pilots must hold an instrument rating and be on an active IFR flight plan.

Pilots must obtain a clearance from ATC before entering Class A airspace and maintain radio contact with ATC. Aircraft must be equipped with an altitude-encoding transponder to provide aircraft location and altitude data to ATC radar equipment.

## Control Zones



An airport with an operating control tower will almost always be surrounded by Class B, C, or D airspace.

Many people often refer to this airspace as a control zone. Though no longer an official Federal Aviation Administration (FAA) term, our [interactive](#)

[airspace map](#) will show you all of the control zones surrounding America's Class B (shown in blue) and C (shown in magenta) airports.

### Class B

Class B airspace surrounds the nation's busiest airports and airport hubs in cities like Boston, Chicago, and Los Angeles among others.

Class B airspace is designed to help manage the flow of high volumes of airline traffic as these aircraft descend from the high-altitude flight levels into the lower altitudes and eventually the airport itself. It also helps manage their departure. The airspace is shaped like an upside-down wedding cake to help funnel aircraft in and out of the main airport.

Most Class B airspace extends from the surface to 10,000 feet MSL with a circular diameter of 40 nautical miles.

Pilots must obtain a clearance from air traffic control (ATC) before entering Class B airspace and then maintain radio contact with ATC. Aircraft must be equipped with an altitude-encoding transponder.

Pilots must hold at least a private pilot certificate to enter. Or, a sport, recreational, or student certificate if certain advanced training requirements are met — although many Class B airports prohibit any student pilot solo flights.

An instrument rating is not required; pilots may operate under visual flight rules (VFR) in Class B airspace as long as they remain clear of the clouds and have at least three miles of in-flight visibility.

### Class C

Class C airspace surrounds other busy airports that have radar services for arriving and

departing aircraft. Typical airports with Class C airspace would be Providence, Nashville, or Sacramento.

Most Class C airspace extends from the surface to 4,000 feet above ground level (agl), with a circular diameter of 20 nautical miles.

An air traffic control (ATC) clearance is not required in Class C airspace, but pilots must be in radio communication with ATC, and aircraft must be equipped with an altitude-encoding transponder. There are no additional pilot qualifications for operating in Class C, D, E, or G airspace.

Pilots flying under visual flight rules (VFR) in Class C airspace must have at least three miles of visibility. They also must maintain a specified distance from the clouds.

### **Class D**

Class D airspace surrounds airports with operating control towers and weather reporting service that are not superseded by more restrictive Class B or C airspace.

Most Class D airspace extends from the surface to 2,500 feet above ground level (agl), with a circular diameter of 4.3 nautical miles (5 statute miles).

Aircraft must establish and maintain two-way radio contact with the control tower before entering or operating in Class D airspace. Weather minimums are the same as for Class C airspace.

### **Class E**

Class E airspace includes all other controlled airspace in the United States. The upper limit of Class E airspace is 18,000 feet mean sea level (msl). However, the lower limit (where it starts) can be 14,500 feet msl, 10,000 feet msl, 1,200 feet above ground level (agl), 700 feet agl, or all the way to the surface of the Earth.

Most nonairport or nonairway Class E airspace located east of the Rocky Mountains starts at 1,200 feet agl, dropping lower over some airports. Most of the Class E airspace west of the Rocky Mountains starts at 10,000 feet or 14,500 feet msl.

The Class E airspace above 10,000 feet msl has greater visibility and cloud clearance minimums for visual flight rules (VFR) operations.

Class E airspace also surrounds airports that have weather reporting services in support of instrument flight rules (IFR) operations, but no operating control tower. Weather minimums for these areas of Class E airspace are the same as for Class C and D airspace.

All victor airways that are not part of a higher class of airspace are Class E airspace.

## Class F

Class F airspace is not used in the United States.

## Class G

Class G airspace is uncontrolled, so it includes all airspace in the United States that is not classified as Class A, B, C, D, or E.

No air traffic control (ATC) services are provided, and the only requirement for flight is certain visibility and cloud clearance minimums.

Most of the airspace up to 1,200 feet above ground level (agl) is Class G airspace. There is virtually no Class G airspace above 1,200 feet agl east of the Rocky Mountains.

## Special Use Airspace



Special use airspace (SUA) includes prohibited areas, restricted areas, warning areas, military operations areas (MOAs), alert areas, and controlled firing areas.

In these areas, aeronautical activity must be limited, usually because of military use or national security concerns.

You can see most standard SUAs with our interactive airspace map.

## Other Airspace Areas

Other airspace areas include airport advisory areas, military training routes, and areas where temporary flight restrictions (TFRs) or limitations/prohibitions apply. For example, TFRs are often established over large forest fires to help keep aircraft from straying into hazardous conditions. Smaller TFRs are issued for presidential movements, some large sporting events, and more.