

AIRSPACE

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INTRODUCTION

When aviation was in its infancy, there was no VFR, no IFR, just flying. Charles Lindbergh related that one night, while flying the U.S. Mail in the Western United States, he decided to tuck up into the overcast that was above him and practice his rudimentary instrument skills. As he ascended into the overcast the warm glow of the aircraft's navigation lights gave him small comfort. Shortly, there was another glow that emerged from the air mass in front of him, and passed off to his side.

It was another Mail plane, whose pilot was doing the same exercise.

The only two airplanes in United States airspace, West of the Mississippi River, came that close to colliding head-on.

Wow.

Clearly, a plan would have to be put into place.

Over the years a defined structuring of United States airspace did indeed happen. This tutorial attempts to put this incredibly complex situation into practical terms without being overly daunting to the reader. This is general information only. For complete definitions, exact descriptions, and the legally binding Federal Aviation Regulations, please visit the Federal Aviation Administration's web site. All altitudes are MSL, and all distances are Nautical Miles unless stated otherwise.

THE BASIC DIVISION: IFR AND VFR

IFR

IFR flight is defined as operating an aircraft in accordance with the applicable Instrument Flight Rules (FAR's). The weather may be clear as a bell, or it may be down to the rocks. You can operate IFR in either extreme, or all of the space between them.

VFR

VFR flight is, basically flying an aircraft with reference to outside visual information, with a flight visibility of three miles, and remaining 1,000 feet away from any clouds. However, as with most every subject in aviation, it becomes a little more complex than this.

SPECIAL VFR

This is a clearance, from ATC, permitting a VFR flight to operate in controlled airspace with minimums of 1 mile visibility, and "clear of clouds/"

A DIVIDED AIRSPACE

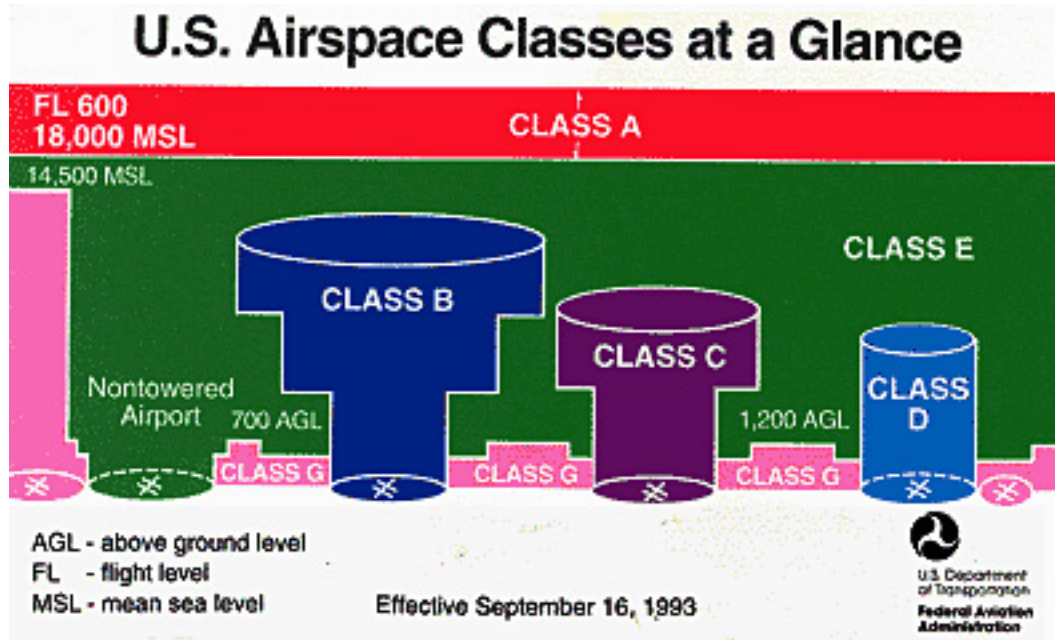
There are two basic categories of airspace, Regulatory and Non-regulatory.

REGULATORY This is defined as the "Class A, B, C, D, and E Airspace Areas," Restricted Areas and Prohibited Areas. There is also a "Class G" airspace that the FAA defines as not being A, B, C,

D, or E. (Don't you just love government definitions?)

NON-REGULATORY This is defined as MOA's (Military Operating Areas), Warning Areas, Alert Areas, and Controlled Firing areas.

REGULATORY AREAS DEFINED



Airspace Classes	Communications	Entry Requirements	Separation	Special VFR in Surface Area
A	Required	ATC clearance	All	N/A
B	Required	ATC clearance	All	Yes
C	Required	Two-way communications prior to entry	VFR/IFR	Yes
D	Required	Two-way communication prior to entry	Runway operations	Yes
E	Not required for VFR	None for VFR	None for VFR	Yes
G	Not required	None	None	N/A

CLASS "A" AIRSPACE

Class "A" airspace is 18,000 feet up to Flight Level (FL) 600 (60,000 feet).

You cannot operate VFR in this airspace.

CLASS "B" AIRSPACE

The airspace from the surface to 10,000 feet that surrounds the busiest airports in the U.S. The configuration is often referred to as resembling a "upside down wedding cake." Each one of these guys is a little different, depending on the airport's configuration. You can't fly in this airspace without a clearance from ATC (Air Traffic Control).

You can operate VFR in this airspace, however you must have a clearance from ATC to do so. You must have 3 miles of visibility, and remain "clear of clouds."

CLASS "C" AIRSPACE

This is the airspace reserved for the garden-variety commercial airports. It can be altered for regional conditions, but is generally a circle around the airport that is 5 miles in diameter from the surface to 1,200 feet AGL (Above Ground Level), and then expands to a 10 mile diameter from that point to 4,000 feet AGL.

You can operate VFR in this airspace, however you must establish two-way radio communications before entry. You must have 3 miles of visibility, and remain 500 feet below, 1,000 feet above, and 2,000 feet horizontal distances away from clouds.

CLASS "D" AIRSPACE

For all intents and purposes, the airspace set aside for airports that have control towers. The airspace is from the surface up to 2,500 feet, and the radius is usually five miles. There may be "keys" that extend out from the circle.

You can operate VFR in this airspace, however you must establish two-way radio communications before entry. You must have 3 miles of visibility, and remain 500 feet below, 1,000 feet above, and 2,000 feet horizontal distances away from clouds.

CLASS "E" AIRSPACE

This is a complex definition because it covers the rest of the airspace not designated in above Classes. If it is Controlled Airspace, and it is not A, B, C, or D, then it is Class "E". All of the Airways (the "V Routes") are in this airspace. Unless otherwise designated, like the "V Routes" for example, it commences at 14,500 feet and extends up to 18,000 feet.

You can operate VFR in this airspace, however you must have 3 miles of visibility, and remain 500 feet below, 1,000 feet above, and 2,000 feet horizontal distances away from clouds.

OTHER AIRSPACES

PROHIBITED AREAS

These are designated for national security, or national welfare. For example, The White House has one. You cannot fly in them. Period.

RESTRICTED AREAS

A catch-all category. These cover everything from test flight areas, to missile tests and artillery or aerial gunnery. This kind of stuff could hurt you. However, the area may or may not be "hot." You will want to check with the nearest ATC facility to find out. Usually they spend more time being inactive than active. If the area is inactive, you are perfectly legal to fly VFR. If you are IFR, ATC will not allow you in if the area is "hot."

WARNING AREAS

Usually extending from three miles off of the U.S. coastlines and outward. They contain "....activity

that may be hazardous to nonparticipating aircraft." That's enough to keep me out of them.

MOA's, MILITARY OPERATING AREAS

This is where the guys, and gals, that protect us in our sleep practice. They can be of any size, and shape. If you are IFR, ATC will provide the proper separation. If you are VFR you can plow right in. It is strongly suggested that VFR operations contact the controlling facility to check on the MOA's status. ATC will provide separation for VFR flights that contact them.

ALERT AREAS

This is similar to an MOA, different only in that aircraft operating in the area must observe all of the established rules and regulations- both the participants, and those transiting the area.

CFA's, CONTROLLED FIRING AREAS

This is the only controlled airspace that is not charted. This is so because "they" cease all activity when spotter aircraft, or ground controllers see an aircraft entering the area. Truly, ignorance is bliss.

ADIZ, AIR DEFENSE IDENTIFICATION ZONES

These are over the water, along the East Coast and West Coast, around Hawaii and Guam. They are there to protect the country from a marauding fleet of bombers, or the individual flight bent on attacking the mainland. If you are IFR, ATC will handle the coordination with the military. If you are VFR, flying say from Bermuda to the East Coast, you must file a DVFR flight plan. If you don't tell the Feds. who you are in advance, count on seeing a man in a helmet flying close formation with you.

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