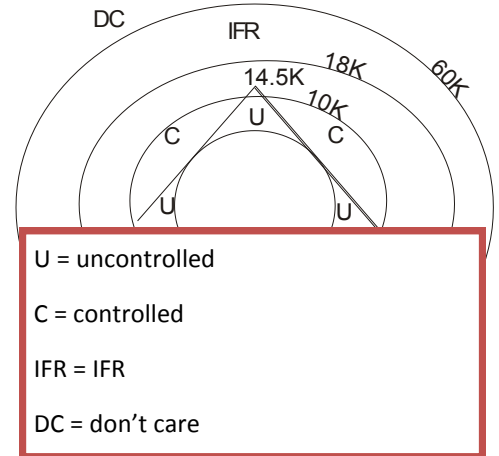


# Flight Advisor (Larry Severson)

## Airspace

Basic VFR is 3 miles visibility with a ceiling of 1000 ft [500 ft below clouds and 500 ft AGL.] There are 6 differently defined airspaces, 5 controlled and 1 non-controlled. Uncontrolled is Class G. The controlled are A, B, C, D, and E. The different spaces are extremely rational. Controlled airspace requires two (2) things, radar contact and two-way radio communication.



### Class G: (Uncontrolled)

[Both radar contact and 2 way communication are restricted by line of sight. Both the curvature of the earth and rising terrain can cause blanking of those signals. Mountains, particularly in the west, dictate the ultimate limit of controlled airspace, but lack of population or terrain could also dictate placement of radio and radar sites.] The lower limit of class G is the surface of the ground. The upper limit is 14,500 feet, unless limited by:

A magenta box (or other shape) that fades in a band towards the inside. In this case the top is 700 feet AGL.

A blue box (or other shape) that fades in a band towards the inside. In this case the top is 1200 feet AGL

In other areas of the country, there are Blue alternating lines with numbers showing the end of class G which are caused by the above described problems.

### VFR requirements:

#### Below 1200 feet:

Day: 1 mile visibility – clear of clouds [even heavy jets are relatively slow at take off.]

Night: 3 miles vis – clouds ( 500 ft under, 1,000 ft over, & 2,000 ft horizontal)

#### Above 1200 feet and less than 10,000 feet:

Same as below 1200 feet during night operations [3V512] [Vision worse and planes faster]

#### Above 10,000 feet:

Visibility 5 miles – clouds (1,000 ft below, 1,000 ft above, & 1 mile horizontal) [5V111] [speeds above 250 knots allowed]

## **Class E: Controlled**

The lower limit is above the class G unless there is a magenta dashed box on the map, in which case the lower limit is the ground. [This exists on the LAX TAC near Hawthorne and is almost certainly the site of the basin radar and radio operation making control to ground level possible.] The upper limit is 18,000 feet. It overlies all other classes except Class A (All IFR, mostly commercial jets).

### **VFR requirements:**

#### Below 10,000 ft:

The same as class G night operations [3V512]

#### Above 10,000 ft:

The same as class G operation above 10,000 ft [5V111]

## **Class D: Controlled** [Airspace around airports with towers with light usage.]

Class D is denoted by a dark blue dashed box which is normally a ring, but may be any shape due to specific requirements of the given airport. The lower limit is ground level: The upper limit is 2500 ft AGL, unless limited by an overlaying class C or B. The actual upper limit will be displayed by a boxed number that is MSL. If the boxed number is preceded by a minus sign, the upper limit is up to, but not including the boxed number. The outer ring is normally 5 statute miles. Radio contact needs to be established near the outer ring. Class D becomes Class G anytime the tower is out of service.

### **VFR requirements:**

#### Below 10,000 ft:

The same as Class E. [3V512]

#### Above 10,000 ft:

The same as Class E below 10,000 ft [3V512]

***NOTE: Class D may exist under Class C or B to aid in instrument procedure control (See Ontario) or missed approaches (see LAX).***

## **Class C: Controlled** [Airspace around airports with towers with moderate usage.]

The lower limit is ground level. The upper limit is 4,000 ft AGL, unless limited by an overriding class B (Does not exist on LA TAC). The magenta rings (or other shape) are stacked. Outside the inner ring there will be a listed top and bottom of the controlled area in MSL. Radio contact is required BEFORE entering Class C, but a clearance is not required. However, it is legal to fly under the floor of stacked segments of class C & B airports without radio contact. This is why ONT has a class D area under its primary instrument leg to remove non-approach traffic. [This raises an interesting problem. KCOS (Colorado Springs has a ceiling of 10,200 ft which meets the 4,000 ft requirement, KDEN is different.)

### **VFR requirements:**

The same Class D at all appropriate altitudes. [3V512]

## **Class B: Controlled** [Heavy Jet airports max a/s <4K ft – 200kts.]

The lowered limit is ground level. The listed upper limit is 10,000 feet AGL, but may vary. (But only 12,000 ft MSL, rather than 15,300 ft at KDEN.) Class B has a number of stacked Blue shapes that give an upper and lower controlled limit listed in ft MSL. No Class B area can be entered without specific clearance by the appropriate ATC agency (Socal Approach in the case of LAX).

### **VFR requirements:**

Visibility 3 miles – clouds (clear) – this area is under positive radar control. The clear of clouds is based on the fact that non-instrument rated pilots seldom fly for more than 15 seconds in clouds before getting into dangerous control problems.

***NOTE: There are 5 routes for VFR traffic (VOR required) through the LAX Class B. One does not require ATC clearance, but does require air to air on 128.3. All 5 are on the Lax TAC chart.***

***CAUTION: There is a confusing class D [dashed] line flowing SW near the coast below LAX. It does NOT disappear when the Hawthorne (HHN) tower closes for the night. It provides positive control for jets on missed approach at LAX. This first appears on the latest LAC TAC.***

## **Class A: Controlled**

The lower limit is 18,000 feet. The upper limit is 60,000 feet.

### **VFR requirements:**

**NOT AVAILABLE** – This is where the Big Jets fly, and is IFR only.

**Other Areas:** [operational details on LAX TAC side panel]

**Prohibited Areas:** - Do not enter! Listed as Prohibited P-##. You are NOT wanted!

**Restricted Area** – Shown by a blue line with fingers pointing towards the inside. Positive clearance must be received prior to entering a restricted area. [Restricted R-##]

**Terminal Radar Service Area (TRSA)** is a delimited airspace in which [radar](#) and [air traffic control](#) services are made available to pilots flying under [instrument flight rules](#) or (optionally) [visual flight rules](#) for the purposes of maintaining aircraft separation. TRSAs are most often encountered surrounding busy U.S. airports. In recent years many of them have gradually been replaced by [Class B](#) or [Class C airspace](#). TRSAs are shown on VFR (Visual Flight Rules) "Sectional" charts as a solid black/gray

**Warning Area**- Shown same as Restricted Area, but named as Warning. No clearance required, but dangerous traffic could be anywhere in it. These areas are more than 12 miles off shore and outside legal control of the government [Warning W-##]

**Alert Area** – Alert areas are not shown directly. They are listed in a table on the map and with a boxed notice that intensive student training exists in the area. The box will give altitudes and frequency to monitor. No clearance required, but dangerous traffic could be anywhere in it.

**MOA (Military Operating Area)** – Shown by a magenta line with fingers pointing inside. It does not require clearance; however, pilot needs to be aware that they may be facing high speed jets at their area coming from any direction.

**Environmentally Sensitive Area** – Shown by a box (shape) line with dots along its border. Not restricted, but clearance of the terrain by 2000 feet is requested to protect the endangered species in the area. [Other altitudes may be listed, as in the case of endangered Condor nesting area which asks for 3000 ft.]

**Military Training Routes** - Not on the LAX TAC. Low altitude routes for planes flying at HIGH SPEED.

**ADIZ: Air Defense Identification Zone** – Not on the LAX TAC. Unless you are coming from Hawaii, you will never see this. Radio contact is needed to avoid interception. It is depicted with a magenta line with staggered dots towards the land.

**Other info:**

Know ALL of the symbology listed on the charts. For example: hard surface runways greater than 1500 ft are solid boxes depicted in blue if they have a tower and magenta if no tower. There are also circles, dots, and stars, along with all of the important info for given airports. In all cases blue is superior and magenta is inferior in requirements.