

Any tips to learning the different altitudes for air spaces?

This is one thing to look for. It will tell you the floor and ceiling heights in each layer of space. Be sure to add 00 on the end of each number. Always remember AGL on sectional charts is the number in (). Everything else is MSL. See 1 below.

Only ones you have to remember are Class E and that starts at either 700 or 1200 AGL depends on if it is magenta shading or blue shading. Class B, C, and D will have markings on the chart giving you the floor and ceiling of the airspace. Blue solid is "B" dashed BLUE is "D" , is before dashed. The magenta is before blue.

Latitude and longitude in minutes and seconds or decimal:

AIRSPACE INFORMATION

Class B Airspace

Sectional



Appropriate notes as required may be shown.

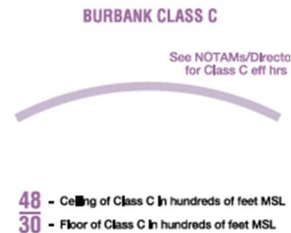
Only the airspace effective below 18,000 feet MSL are shown.

(Mode C see FAR 91.215 / AIM)

Class C Airspace

Appropriate notes as required may be shown.

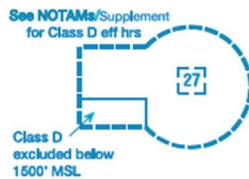
(Mode C see FAR 91.215/ AIM)



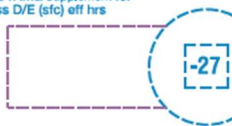
CTC BURBANK APP WITHIN
20 NM ON 124.6 395.9

Class D Airspace

Altitude in hundreds of feet MSL



See NOTAMs/Supplement for Class D/E (sfc) eff hrs

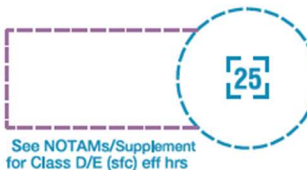


(A minus in front of the figure is used to indicate "from surface to but not including...")

Class E Airspace

The limits of Class E airspace shall be shown by narrow vignettes or by the dashed magenta symbol. Individual units of designated airspace are not necessarily shown; instead, the aggregate lateral and vertical limits shall be defined by the following:

Airspace beginning at the surface (sfc) designated around airports.



Airspace beginning at 700 feet AGL that laterally abuts 1200 feet or higher Class E Airspace.



Airspace beginning at 700 feet AGL that laterally abuts uncontrolled (Class G) airspace.

Airspace beginning at 1200 feet AGL that laterally abuts uncontrolled (Class G) airspace.



Differentiates floors of airspace greater than 700 feet above the surface.

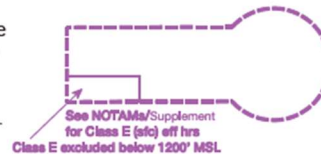


When the ceiling is less than 18,000 feet MSL, the value prefixed by the word "CEILING", shall be shown along the limits.

Airspace beginning at the surface (sfc) designated around airports.



Airspace beginning at the surface with an airspace exclusion area where Class E airspace is excluded below 1200' MSL.



Let's imagine you're **flying a drone**—or piloting a plane—and you want to know how high you are.

But wait! Are we talking about your height above the ground, or your height above sea level?

That's where AGL and MSL come in, and understanding the difference is crucial for pilots, drone operators, and aviation enthusiasts alike.

Above Ground Level (AGL): Your Height Above the Ground

AGL is the literal height above the ground or surface you fly over.

If your drone is hovering 300 feet above a hill, that 300 feet is your AGL.

Fly over a valley, and your AGL increases, even if your drone stays at the same altitude.

Mean Sea Level (MSL): Your Height Above Sea Level

MSL, on the other hand, is your height measured from the average sea level across the globe. This isn't a static number—scientists calculate it based on tidal data collected over 19 years. It gives a universal reference point for altitude.

So if you're flying at 10,000 feet MSL, that's your elevation above the average sea level—even if the ground beneath you rises or dips.

So, What's the Difference?

AGL changes depending on the terrain below you. Fly over a mountain, and your AGL shrinks. Fly over a canyon, and it grows. MSL, on the other hand, stays consistent for your altitude, regardless of what's happening below.

Quick Tip for Sectional Charts

On a Sectional Chart, all of the numbers you see that state altitudes are in MSL, unless they are in parentheses. If you see a number in parentheses, that indicates it's in AGL.

For example, when we look at Cooperstown Airport, this 1,424 number indicates that the airport sits at 1,424 ft mean sea level (MSL).



When it comes to towers and other obstructions, these are what they look like on a Sectional Chart.

Check out this lighted tower.

You will see “1049 (1036)” next to the symbol. This means that this tower is 1,049 feet MSL and 1,036 feet AGL.

If you were standing at the base of this tower, it would rise up exactly 1,036 ft from where you're standing. But the MSL height is a little higher given the terrain elevation above sea level.



If you're studying for your FAA exam, you'll see some tricky questions that involve these obstruction icons and AGL vs. MSL. The good news, remember, is that these obstruction icons are included in the Sectional Aeronautical Chart legend that you have access to during your test, right after that Table of Contents.

What About Airspace Altitudes?

What about airspace? Which classes of airspace are charted in MSL and which classes are AGL?

Remember that on a Sectional Chart, any number indicating altitude (unless it is in parentheses) is charted in MSL, mean sea level.

So Class B and C, with the fractions that denote the floor and ceiling altitudes, those numbers are MSL. Same with Class D and the bracketed number. That's also MSL.

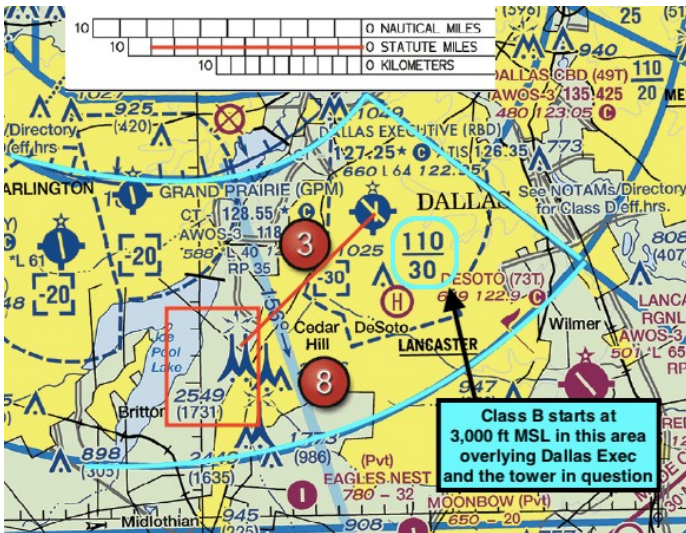
The only airspace that is referenced in AGL is Class G and Class E Transition airspace that starts at either 700 ft AGL (inside the thick fuzzy magenta lines) or 1,200 ft AGL (when nothing is marked).

(Refer to Figure 25, area 8.) What airspace would you be operating in if flying at the maximum allowable altitude while inspecting the towers 9 statute miles SW of Dallas Executive Airport (RBD)?

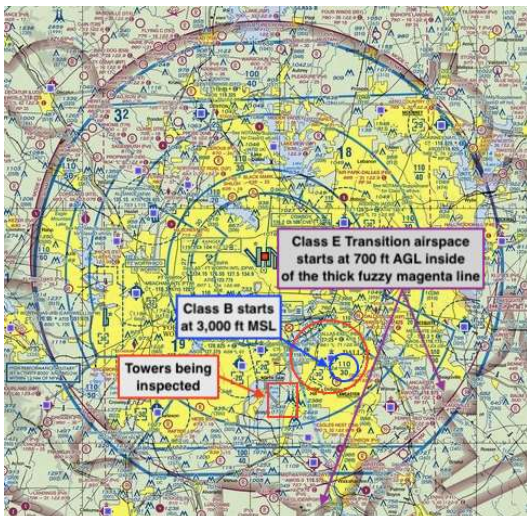
This is one of the most complicated Sectional Chart excerpts you'll encounter. It's crowded and difficult to interpret. Take your time to first identify where Dallas Executive airport is located.

This question is asking us about the airspace that covers the towers that we are inspecting 9 statute miles SouthWest of Dallas Executive Airport. Looking at the chart, you want to locate the towers with the light icon above them, the tower almost looks like an M with sparks on top.

Looking specifically at the towers 9 SM southwest of the Dallas Exec you may think that the towers are located in Class G airspace.



However, if you zoom out a bit and look at the outer edge of the airspace, you'll notice there is a thick fuzzy magenta line that envelopes the entire Dallas Fort Worth airspace. This indicates that Class E airspace starts at 700 ft AGL anywhere inside of the thick fuzzy magenta line.



So, if you were to fly 400 feet above the tower in question you would be at an altitude of 2,949 ft MSL or 2,131 ft AGL. Here's how the airspace stacks up from the surface to Class B.

Class B – starts at 3,000 ft MSL

Class E – starts at 700 ft AGL and extends up to 2,999 ft MSL (400 feet above the top of the towers (2,949 ft MSL) places you in Class E airspace

Class G – starts at the surface and extends up to 699 ft AGL

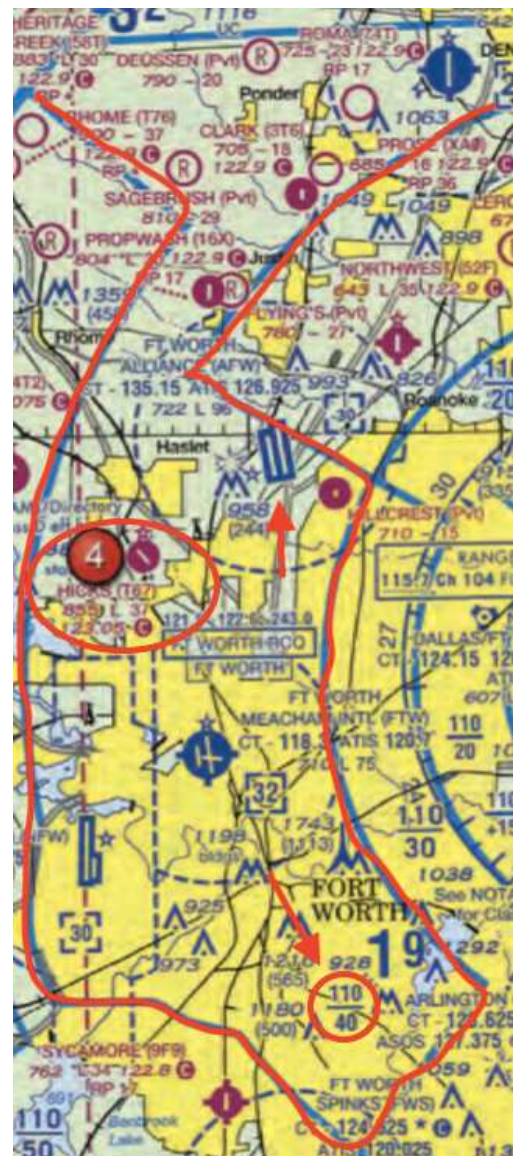
(Refer to Figure 25, area 4.) What is the floor of Class B airspace at Ft. Worth Alliance (AFW) airport?

- A) At the surface
- B) 3000 ft. MSL
- C) 4000 ft. MSL

The answer to this question is C.

This is one of the most complicated Sectional Chart excerpts you'll encounter. It's crowded and difficult to interpret. Take your time to first identify where Ft. Worth Alliance (AFW) airport is located.

In this closed off part of Class B airspace, indicated by the blue solid lines, we see a fraction that says 110/40, meaning that this part of Class B controlled airspace doesn't start until 4,000 ft. MSL.



(Refer to Figure 25, area 3.) If Dallas Executive (RBD) tower is not in operation, which frequency should be used as a Common Traffic Advisory Frequency (CTAF) to monitor airport traffic?

- A) 127.25 MHz.
- B) 122.95 MHz.
- C) 126.35 MHz.

The answer to this question is A.

After locating the Dallas Executive (RBD) airport icon on the chart, look for the airport information text next to the icon. Remember that in the testing supplement legend, you're actually being told exactly where a lot of information is on the Sectional Chart.

) 127.25* with a star, followed by a blue circled C. The star indicates part-time operation of the tower. Many towered airports close their towers overnight, keeping the airport open for cargo operations and other activity. The frequency that appears before the blue circled C is ALWAYS the Common Traffic Advisory Frequency (CTAF), and it's also the frequency pilots use to monitor local chatter, coordinate arrivals and departures and give their position and acknowledging other aircraft in the traffic pattern.

2) Next, you see ATIS 126.35. ATIS stands for Automatic Terminal Information Service. This is a continuous broadcast of recorded aeronautical information such as weather, active runways, available approaches, NOTAMs, etc.

3) Finally, you see 122.95 which is the UNICOM frequency. The UNICOM frequency is an air to ground communication facility operated by a private agency that pilots contact to request fuel and other non-flight services.

Part of the frustration with learning the frequencies associated with airports is that not all airport report the same frequencies. And while it would make a difference if the tower were to be closed at a different airport, in the case of this particular airport the same frequency is used, 127.25, and this is why 127.25 is the correct answer.

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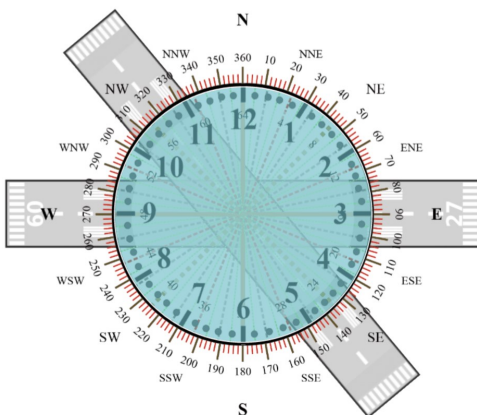
(Refer to FAA-CT-8080-2G, Figure 26, area 2.) While monitoring the Cooperstown CTAF you hear an aircraft announce that they are midfield left downwind to RWY 13. Where would the aircraft be relative to the runway?

- A) The aircraft is East.
- B) The aircraft is South.
- C) The aircraft is West.

The answer to this question is A.

You don't need to reference the chart to answer this question. It's a red herring and meant to throw you off!

Runway 13 is positioned toward 130 degrees, or southeast. This means airplanes will be taking off and landing toward the southeast. The aircraft is coming from northwest at 310 degrees, and the nose of the aircraft is pointing toward 130 degrees as it moves southeast.



In a normal left-hand traffic pattern, aircraft move in a counterclockwise pattern around the airport. So, when the aircraft turns 'left,' it is from the pilot's perspective, not from your perspective.

If a plane is midfield left downwind RWY 13, it means that the plane is flying parallel to the runway, in the opposite direction (downwind) of the runway, so in this case 310 degrees, or northwest. If the plane is "left downwind" it means that the runway is to the plane's left. So knowing all of this, if you chart / sketch it out, the plane is to the east of the runway.

