

# NEWSLETTER

## CFI BOOTCAMP

### WHERE IS ADS-B REQUIRED?

Automatic, dependent surveillance-broadcast, or ADS-B, is required to be on and operational in airplanes with electrical systems that fly in the following areas:

- Inside of the mode C veil surrounding Class B airspace.
- In and above Class C airspace.
- Class E airspace from 10,000 MSL and above, except within 2,500 AGL of terrain.
- Class A airspace.
- Within 12 nm of the US coastline from 3,000 to 10,000 MSL in the Gulf of Mexico.

It's important to know where ADS-B is required when using ADS-B traffic. In areas where ADS-B isn't required, some airplanes won't have it and, therefore, won't appear as traffic. The number of aircraft without ADS-B in congested areas will be small. Still, in sparsely populated areas, such as in the middle of Wyoming, there could be several airplanes flying around without ADS-B.

#### Note:

By the way, the abbreviation CONUS, in the Class E section, means the Contiguous United States, which is the lower 48. It excludes Alaska, Hawaii, and any US territories.



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**Bootcamp**  
Pilot Training

## CFI Bootcamp Program Calendar

I included a graphic that shows where ADS-B is required so that you can more easily understand when you

	Live	Virtual
<p><b>November 2023   KOPF - KPAO     Zoom</b></p> <p><a href="#">Register Now.</a></p> <p><b>Intial CFI Program   11/12/23 - 11/19/23</b> 7 Day Immersion Class Focused on Preparing you for the CFI Practical Checkride. (In - Person or Live Streaming options available.)</p>	7	4
<p><b>December 2023   KPAO - Remote</b></p> <p><a href="#">Register Now.</a></p> <p><b>Intial CFI Program   12/04/23 - 12/10/23</b> 7 Day Immersion Class Focused on Preparing you for the CFI Practical Checkride. (In - Person or Live Streaming options available.)</p>	7	4
<p><b>Instrument Flight Instructor   12/11/23 - 12/13/23</b> 3 Day Immersion Class Focused on Preparing you for the CFI Practical Checkride. (In - Person or Live Streaming options available.)</p>	5	4

### THE POWER HOUR IS OVER TWO YEARS OLD, WITH 152 EPISODES.

In case you don't know, CFI Bootcamp does a live one-hour lesson on Saturday from noon to one Eastern time. Topics vary from deep dives on specific maneuvers, the art of visually flying, ForeFlight features you probably didn't know, How to use a Syllabus and lesson plan together, and more. The Power Hour is free when it's live.

[Click here to get the login details.](#)

You get a reminder mid-week, an hour before the show and when it starts, so you won't miss it.

## POWER HOUR LESSON SCHEDULE



**What if I don't have my Commercial Yet?**  
Should I do commercial and CFI together? Yes! - and here's how!



**Tribal knowledge videos**  
We play an hour of real good lecture from our CFI round table in Jekyl Island.

## WHAT CAUSES ADVECTION FOG? - IT'S ALMOST TIME FOR THE FOG IN SAN FRANCISCO TO GO AWAY FOR THE WINTER.

Advection fog is different than radiation fog. Areas in low valleys with particulate matter in the air, like near factories, are subject to radiation fog. This fog is typically thin, just a few hundred feet or so. It requires little to no wind and occurs on clear, cold nights. If the wind picks up, the fog will clear. If it's overcast, the ground can't radiate the stored heat so it won't cool. The mechanism to form requires the ground to radiate heat, which then rises and cools the air just above the surface. Radiation fog can develop if there is adequate moisture and something to condense on, like pollutants, dust, etc



Advection Fog in San Francisco

Advection fog, however, works entirely differently. It requires wind to form. Let's look at how San Francisco's advection fog forms and dissipates daily in the summertime.

Air over the sea is moist, and the sea is cold—the perfect combination for thick fog to form. The winds in the Bay Area are typically from the northwest. During the daytime, the ground in the Bay Area and beyond is heated by the sun. This causes a low-pressure area to form. As evening approaches, the low pressure attracts the higher pressure from the sea, and combined with the prevailing winds, the sea fog can now find its way through the gap in the coastal mountains, which is where the Golden Gate Bridge is. This allows the fog to find its way through the Golden Gate, which can then spread into the Bay Area.

In some cases, the pressure gradient and wind can align so well that the fog can be lifted over the roughly 2500 ft mountains north and south of the Golden Gate and spill over the top of the hills into the bay area. Another gap, the San Bruno gap, is directly in line with the San Francisco Int'l Airport. This is also an easy path for the fog to travel. Wind, even a strong one, is required for this to work. This fog can be thousands of feet thick and spread well into the Bay Area and through the strait of Carquinez before the sun finally heats it past the dewpoint. The cycle happens every summer. It begins to form in the evening around seven or so, and then when the sun sets, the fog covers the bay. When the sun rises, it begins heating the fog from above and eventually, by about ten or so in the morning, finally heats it enough so that the fog dissipates.

Advection fog in other places relies on moist air encountering cooler ground. As the wind blows this moist air over the ground, advection fog forms. The opposite conditions for radiation fog to form. Advection fog can form in windy conditions, and it can be completely overcast.

## ANNOUNCING A NEW CFI BOOTCAMP LOCATION - LAS VEGAS, NV

We completed the first CFI Bootcamp at Chennault Flying Service in North Las Vegas, NV. We plan to have an in-person or remote class here every quarter (three months.) The class this September had 8 in person and one remote. This location can accept VA benefits for Flight Instructor training. To use this option or to complete the course under Part 141, you must also do the flight training there. There is no stand-alone ground course for the Flight Instructor certificate. It's both flight and ground. You can, however, attend just the ground portion, like the rest of our locations. It's the same class, but you don't get 141 credit. For most people, this doesn't matter too much, but for the military people, it helps to get things paid under the VA benefits.

The next class is going to be at the beginning of next year. Look for it on our Website, [cfibootcamp.com](http://cfibootcamp.com). There, you'll find the calendar option at the top, and you can click it and check for available dates. We will be setting the 2024 class schedule next month, October, by the way.

## PRO TIPS OF THE MONTH

1. Winter is Silly Putty time. - What? Silly putty is an old toy thing for kids. It is a silicon-based ball in a plastic case that looks like an egg. You can bounce it and even transfer images from comic books. Does anyone do that? Well, you need to get a few containers because the stuff works great for winter flying to plug those vents that leak in cold air or gaps in the windows that let you get rained on. The nice part is that you can pull it out of the vent opening or window gap once you're on the ground because it doesn't stick to them. Try it.
2. Fly the glide slope with the elevator and maintain airspeed with power. When flying a glideslope, make changes to it with the elevator and use the power to change the airspeed. The fastest way to change the flight path of an airplane is by elevator. Fighter pilots don't add power to climb vertically at first. They use the elevator. If you try to use power, you can get away with it in a light airplane, but it won't work in something heavier. The airplane has momentum and power but is not an effective flight path changer. Some airplanes, like the Citation CJ, have engines above the Center of Gravity. Increasing power causes a nose-down flight pitching moment. If you used power to try to hold the glideslope, you'd simply cause the airplane to descend. Hopefully, you weren't below the glideslope.
3. Determine the airplane's best glide angle and maximum descent angle. This one is one of my favorite things to teach a pilot. It's a handy thing to know. To determine the farthest you can go with the engine at idle and the speed at best glide, do the following:
  - a. Set the best glide speed with the power at idle. Trim and look through the windscreen to find the area on the ground that stays where it is. That is where you are going, and that's as far as you can go. Closer places move toward the airplane, and too-far places slowly crawl up the windscreen. Now measure, using your hand or any other method, how far below the horizon the area that isn't moving is. This is the shallowest angle you can achieve. Attempts to go farther than that point won't work.
  - b. Now, change the speed to the approach speed, apply full flaps, and slip. Maintain the airspeed and notice that the place the airplane is descending to now has changed, and it's considerably closer to you. Now, measure how far this point is below the horizon using your hand. How many fingers is it? This is the steepest angle to the ground you can achieve while maintaining the approach speed. If the point you are trying to land on is before this point, you will be too high or too fast.
  - c. Determining the shallowest and steepest angle to the ground where your airplane can descend and maintain airspeed will allow you to plan a better power-off approach, landing from a simulated or real engine failure, and improve your understanding of visual flying.

## FLIGHT TRAINING THE WAY I SEE IT | PODCAST

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