

JETSTREAMS

AHART AVIATION SERVICES

AHART AVIATION SRVC
186 Airway Blvd.
Livermore, Ca. 94551
TEL: 925.449.2142
FAX: 925.373.0944
ahart@ahart.com
www.ahart.com
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As many of you have noticed, our aircraft schedule has been extremely busy lately. The aviation industry is growing and as a result we are seeing a large number of students coming through Ahart for training. In response to this heightened demand we are actively looking for more aircraft to add to our fleet. In fact we hope to have another Cessna 152 the first week of March and another twin engine and complex aircraft online this Spring. In the meantime, please be considerate of your fellow students by scheduling aircraft only for the time you will actually be flying and scheduling as far in advance as possible. We also ask that when you need to cancel a reservation you let us know as early as possible so that someone else can use the aircraft you had scheduled.

As always, we thank you for your business and value all of our customers!

Happy and safe flying,

~Lysa Wollard

February Achievements

Hatch Graham

Solo
Randi Coon

Derek Sanders

Private
James Hubbard

Jeff Erhart

Private
Jerry Nemier

Everette Moss

Instrument
Dave Gregory

Julio Morris

Commercial Single Engine
Tim MacHugh

Takuya Suzuki

Commercial Multi Engine
Ivan Szeto

Derek Choy

Commercial Multi Engine
Ivan Szeto

Dan Ward

Commercial Multi Engine
Brian Dreger

Chuck Quinn

ATP—SEL
Randi Coon

Beth Duff

PART 141 Chief Flight Instructor

Bill Komanetsky

PART 61 Chief Flight Instructor

Tim MacHugh

Assistant Chief Flight Instructor

**FLIGHT INSTRUCTOR OF THE
MONTH:
Derek Sellers**

Control Tower at Castle AFB

Due to heightened activities at the Castle AFB in Atwater, CA an FAA control tower has been opened. Effective January 30, 2007 Castle (MER) is now surrounded by Class "D" airspace with the control tower operational from 0700-2100 PST. The Tower Frequency is 118.175.

This is really good news for Ahart as we send a lot of our student pilots to this airport for cross country practice. However, while the control tower does increase the level of safety when flying into Castle's airspace it does not eliminate the responsibility of pilots to keep an eye out for other aircraft and to stay clear of traffic. Also, remember that Castle now trains hundreds of students each month and congestion, especially during the week is going to be high.

For more information on the control tower at Castle please visit the following link: <http://www.co.merced.ca.us/pdfs/CastleTowerAirspaceAnnouncementColor020607.pdf>

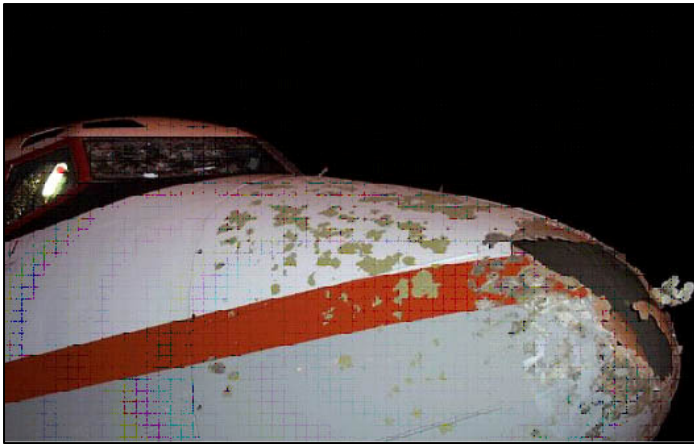
Thunderstorm Avoidance

by Terry Lankford

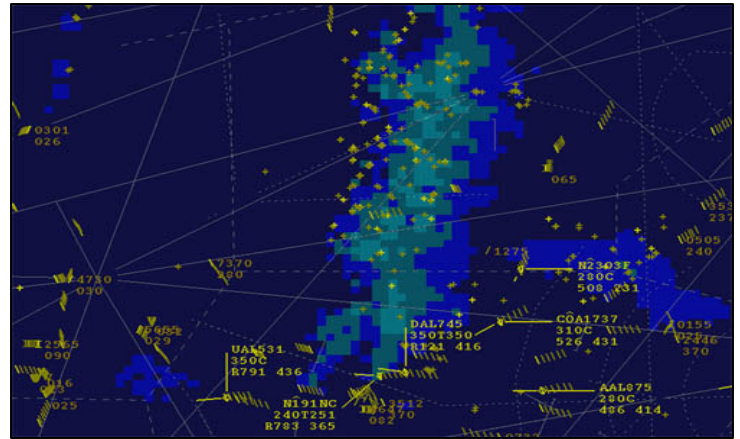
Spring—the most active thunderstorm season—is just around the corner. It's imperative that we actively maintain awareness of convective (thunderstorm) activity along our route of flight. A number of sources provide convective information. Among these are weather reports and forecasts, PIREPs, weather radar, and satellite imagery.

In-flight convection, and its associated hazards, are implied through airborne weather radar, lightning detection equipment, and the "MARK 1" eyeball. We also have access to convective information through ATC facilities, and hand-held or panel mounted ground based weather radar displays.

NONE of these displays *directly* measures significant turbulence or hail! And, these hazards can exist, in clear air, 20 miles from the storm. Add the fact that each has its own set of limitations, which must be understood to effectively be apply to a flight situation.



Hail damage encounter in "clear air."



ATC weather display.

ATC radar systems display weather differently depending on the equipment. The display most likely will NOT be the same as seen on airborne weather radar. The same is true for "in cockpit" ground based displays. Controller training varies, and workload and priority of duties often limit their ability to provide pilots with weather avoidance advisories. This is especially true in congested terminal airspace.

ATC and Flight Watch weather radar advisories, along with "in cockpit" ground based displays, should be considered *strategic* avoidance tools; airborne storm avoidance equipment *tactical* avoidance tools. If you don't have appropriate electronic *tactical* tools, the only remaining option is visual avoidance—the "MARK ONE" eyeball. And, that requires you to remain clear of the clouds—even on an IFR flight plan.

ATC, Flight Watch, and other ground based displays are supplements information. They should be used to augment, not replace, onboard electronic systems or visual avoidance. As noted by the NTSB: "Severe weather avoidance is primarily **your responsibility**." If you don't have the equipment, remain well clear of convective activity. Relying on someone else is potentially disastrous.

For additional information on this subject refer to the "NTSB SAFETY ALERT Thunderstorm Encounters" and AVWEB's article "Say Again? #71: Weather Radar." This subject is also covered in Fred Abram's "Aviation Weather Seminar."

Remember—*Day Light Savings begins on Sunday, March 11th*
Set your clocks one hour ahead the night before!

Flying Gourmet

by Jim Jellison

A few months ago I wrote about my wonderful experience at the Zin Restaurant & Wine Bar in Healdsburg. I said that if you were going to make a trip up there that you should stay overnight so that you could enjoy some of the local wines. Well, I took my own advice and had one of the best get away weekends that I have ever had. It was a combination of a great place to stay, wonderful food, and splendid company.

I booked two nights at the Hotel Healdsburg and Spa. It's located right in the middle of town so you don't need a car. Everything, and I do mean everything, is easy walking distance from the hotel. Don't worry that you will miss visiting the various wineries, as lots of them have convenient tasting rooms that are open 7 days a week right in town. Plus, there are several wine stores that feature local wines at the same price or cheaper than the wineries themselves.

The hotel, in a word, is "minimalistic." What I mean to say is that it isn't over done with too much furniture, pillows and such. The windows are covered with wooden shutters but no curtains, the floors are made of wide wood planks covered with scatter rugs, the desk had no drawers just a writing surface and the closets had no doors just curtains. When we first entered our room there was smooth jazz playing from the bed-side CD player and only the glow of the indirect lighting over the six foot tub in the bathroom. The shower had no door just two, floor to ceiling, perpendicular clear glass walls. Don't get me wrong, it was very comfortable just a little different than what I'm accustomed to. Our room was on the third floor over looking the town square and had a small balcony.

We dined at the Dry Creek Kitchen. The Dry Creek Kitchen is located in the Hotel Healdsburg and is the creation of Charlie Palmer, one of America's leading chefs and owner of the acclaimed Aureole in New York City. Reservations are definitely recommended, as even on a week night it was packed. My wife had the Bacon Wrapped Pork Tenderloin with Tokyo Turnip, Fondant Potato, and Braised Love Farm's Greens. I just had to try the Painted Hills Natural Beef Coulotte with Caramelized Shallot Mashed Potatoes and Blue Lake Beans. This wasn't an inexpensive meal but very reasonable when you consider the quality, presentation, and the setting. Since my wife was having white meat and I red, we decided to wash these wonderful meals down with a bottle of Blanc de Noirs. Dessert was complimentary with our stay at the hotel as was our breakfast the next morning. We ate our scones in the sitting area of the bar in front of the stone fireplace.

The first evening we were there (Sunday) a quartet was playing in the wine bar and when we returned from dinner it was standing room only. The Dry Creek Kitchen also had a quartet playing soft music during our dinner, as background to the conversation I was having with my lovely wife.

If you have never ridden in a Scion, you know that boxy vehicle that looks like a toy, you will get your chance on the ride to and from the airport with the Healdsburg Taxi Cab Company. The Scion is very roomy inside and has a surprisingly comfortable ride. Healdsburg (O31) is approximately 77 nautical miles North West of Livermore.

Instructor Corner

by Jordan Miller

So you think we made it to the easy part? Planning the climb for a cross-country was no sweat, but cruise is easy, right? Not so fast! In the last Instructor's Corner we began looking at cross country flight planning by developing the preliminary data and determining a top of climb point. This article will develop the procedures for the cruise portion of a cross country flight.

From the preliminary planning it was decided that the cruise altitude would be 10,500' and 55% power would be used in order to achieve the required range. By looking at the cruise performance page (5-18) we can determine the power setting, true airspeed and fuel flow. Unfortunately there are different performance numbers based on whether the cruise temperature is above or below standard. From the winds aloft forecast, the cruise temperature can be determined. Since winds aloft forecasts are developed at 3000' intervals, it is easy to interpolate the temperature for 10,500' since it is half way between the 9,000' and 12,000' forecast. The temperature at 9,000' is 8C and the temp at 12,000' is 2C. To interpolate, the difference between the two temperatures is divided by two and then added to the 9,000' temp. The result is 5C.

What is standard temperature at 10,500'? The easiest way to find standard temperature is to look at the Time, Fuel and Distance to Climb chart on page 5-17. Included in the chart is a temperature scale that shows standard temperature. Standard temperature for 10,500' is -6C. Therefore, the forecast temperature is 10C above standard and the performance for cruise should be interpolated between the standard and 20C above standard columns.

By looking at the 10,000' pressure altitude row, 57% power can be obtained at 2400 rpms. The chart also indicates that a true airspeed of 104 ktas (103.5 ktas based on mathematical interpolation) and a fuel burn of 6.4 GPH. Then the speed of 104 ktas has to be decreased by 2 ktas if the airplane is not equipped with speed fairings per the note at the top of the chart.

Once the true airspeed is known, the winds aloft can be used to find the ground speed using an E6B. For example, with an initial course of 350 degrees, the ground speed is 107 knots. If the distance between checkpoints is known, dividing the distance by the groundspeed will result in the time between checkpoints in 10ths of an hour. By multiplying this number by 60, the time in minutes between checkpoints can be determined.

The chart does not provide the indicated airspeed that should be expected during cruise. Without knowing what indicated airspeed to expect, there is no way to tell if the aircraft is not performing as predicted in the charts or if the winds aloft are different than forecast. To find IAS from TAS, first the TAS must be converted to CAS using an E6B (reference previous articles on airspeeds). From the example above the CAS is 85 KTS. Once CAS is found it can be converted to IAS using the Airspeed Calibration chart on page 5-9. The IAS should be 86 knots.

The required information for cruise is known. Once at cruise altitude and at 2400rpms, the airspeed indicated should be 86 knots and result in a ground speed of 102 (for a plane without speed fairings). Any change to these parameters allows the pilot to make an informed decision. For example, if the indicated airspeed is 80 knots instead of 86, the pilot can decide to either add power and burn more fuel to maintain the schedule, or accept the lower speed and adjust the ground speed. If the indicated airspeed is correct, and the time between checkpoints is not correct, then the difference must be a change in groundspeed due to winds aloft being different than forecast.

By knowing the expected IAS, Ground speed and winds aloft the pilot knows all the required information to make informed decisions about the cruise portion of flight. In the next Instructor's Corner decent planning will be examined.