

JETSTREAMS

AHART AVIATION SERVICES

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November 2005

Thanks to everyone who made it to the G1000 ground school. It was a big success and Bill Komanetsky and Fred Abrams did a superb job of putting together a detailed and interesting presentation full of lot's of good information. We are now looking forward to a Mountain Flying seminar that is in the process of being created. More details to follow in January.

This month Ahart will be getting a facelift. We are hoping to get new carpet and paint around the end of the month. We also have new chairs and a table. In the long run this will make the office look a lot nicer, in the short run we may have a mess for a week or so. Please be patient with us and be prepared to come in through the back door for a couple of days!

I hope everyone had a fantastic Thanksgiving and a wonderful holiday season.

Happy and safe flying,

~Lysa Wollard

November Achievements

Bob Duyn Solo <u>Jerry Nemier</u>	James Graeb Instrument <u>Tim MacHugh</u>
Jeff Erhart Solo <u>Jerry Nemier</u>	Takuya Suzuki Instrument <u>Ivan Szeto</u>
Mark Grubbs Solo <u>Jerry Nemier</u>	Sunghee Back Multi-Engine Commercial <u>Derek Sellers</u>
Mark Nixon Solo <u>Jerry Nemier</u>	Rosauro Tagulao Private <u>Tim MacHugh</u>
Mike Potter Solo <u>Jerry Nemier</u>	Piotr Ptak Private <u>Derek Sellers</u>
Satoshi Ikeda Solo <u>Steve McEachern</u>	Briano Santos Instrument <u>David Gregory</u>
Caba Moldvai Solo <u>Spencer Thomas</u>	Steven Butkovich Instrument <u>Neal Beuerman</u>
Andrew Foo Single-engine Commercial <u>Derek Sellers</u>	CFI of the Month Derek Sellers

Private Pilot Ground School

Starting January 22, 2006
11 week course
Monday and Wednesday
6:30pm-9:30pm
\$300.00 plus books and materials

Instrument Rating Ground School

Starting January 16, 2006
10 week course
Tuesday and Thursday
6:30pm-9:30pm
\$300.00 plus books and materials

Please contact the front desk to register or visit www.ahart.com for a syllabus and more information

Winter Weather Patterns

By Terry Lankford

Winter can be one of the best flying seasons, with its cool temperatures and usually excellent flying weather between storms. But, like mountain flying in the summer, winter presents its own unique hazards.

Turbulence occurs frequently during the winter season. In addition to that normally associated with fronts, the general westerly flow of air meets the north-south oriented mountain ranges. Mountain waves are fairly frequent over the Cascades, Sierra Nevada, and Rockies with some of the most severe occurrences in California's Owens Valley. Mountain wave clouds can often be identified on satellite pictures. However, with a lack of sufficient moisture, mountain waves can exist in cloudless skies.

Some of the worst turbulence occurs with easterly winds produced by strong surface high pressure systems over the Great Basin. Foehn-type descending winds flow across ridges, down through passes and canyons to the Pacific Ocean. The layer of easterly winds may be quite shallow with westerly winds above. The resulting shear, together with venturi effects through the mountains, produces severe turbulence and strong updrafts and downdrafts. Winds in the passes and along leeward foothills may be three to four times the speed of winds from nearby reporting stations. The Columbia Gorge, Oakland foothills, and Southern California are noted for this condition.

Clear Air Turbulence (CAT) is also common in the winter season. The Jet Stream, lows aloft, and sharp troughs can cause severe CAT. Sharp troughs can produce severe wind shear turbulence as low as 8,000 to 10,000 feet.

Icing problems exist mostly with winter fronts and cold lows aloft. With flight altitudes often governed by terrain clearance, freezing level heights are a real concern in flight planning. Additionally, in the mountains and high plateaus the freezing level is often at the surface! Freezing rain and freezing drizzle in interior valleys or associated with polar or arctic fronts can cause a significant icing hazard to VFR as well as IFR flights.

Low ceilings and visibilities accompany frontal systems and low pressure areas. Fronts from Pacific storms usually lower ceilings and visibilities for four to twelve hours before frontal passage.

Contradicting a widely held misconception, high pressure during the winter season can result in adverse weather. Some of the lowest ceilings and visibility develop in the inland valleys, and some of the most severe turbulence over the mountains.

Thunderstorms are not frequent. In winter, thunderstorms accompany fronts and develop in the cold air of cut-off lows. Thunderstorms are rarely severe, but occasionally require the issuance of a Convective SIGMET.

The Flying Gourmet

by Jim Jellison

It was a beautiful, bright blue sky Thursday in October, the perfect afternoon to play hooky from work and head for Healdsburg. It was one of those days where the visibility was so good that you could see landmarks long before you should be able to. As I climbed out of Livermore towards the North West, San Francisco sparkled and it seemed that I could reach out and touch the towers of the Golden Gate. One thing that I did think strange was that ATC assigned me a different squawk with each new frequency. Maybe it was a transponder test!

As I descended to enter the pattern at Healdsburg the beautiful fall colors of miles and miles of vineyards came into view. The field was all but deserted as I touched down on runway 13 and back taxied to transient parking. The pilots lounge was comfortable but also deserted as I waited for my taxi. Then company arrived, as a beautiful green and white conventional tailed Bonanza glided over the threshold and into view. Just as this guy was finishing tying down my taxi arrived. Some guys have all the luck. I had waited 30 minutes and he just arrived, walked over, and there was a taxi. He had flown in from Hanford for the weekend and I was glad to share the taxi and the expense of the ride to town with him.

I was the first to get dropped off, since I was the one who had called - taxi etiquette. I had decided on a restaurant called Zin that I had found on the web located at the corner of Center and North streets. Inside Zin has a natural gray concrete floor and walls with an exposed wooden truss ceiling, pretty simple. In the back is the kitchen and along one side wall there is a wine bar. It was surprisingly quiet, despite being crowded, and the lack of acoustic deadening materials. You could even hear the soft jazz playing in the background. This establishment is not only a restaurant but a serious wine bar. How serious you ask? Well, the food menu is one page and the wine selection goes on for four more pages. There are lots of great local wines and it seems that they serve them all.

I had a table facing the street, which was nice because the warm afternoon brought out plenty of attractive young women. I guess they were with guys, but I didn't notice the guys! I ordered the Carolina BBQ Pulled Pork with slaw and marinated onions accompanied with Kennebec Potato French fries. Zin makes their own catsup, mayo, and pickles, believe me it makes a tremendous flavor difference. The homemade BBQ sauce was so tangy that I had to order the homemade tangerine and mango sorbet for dessert to put the fire out.

If you fly to Healdsburg consider staying over night to really enjoy the wine and food this town has to offer. Healdsburg (O31) is approximately 77 nautical miles North West of Livermore.

Instructor's Corner: Navigation Log

By: Jordan Miller

It is a beautiful Sunday night as you fly up the California coast to Seattle. The interior lights of the twin-engine Piper Chieftain are turned off and you intermittently scan the instrument panel by the soft blue light of a full moon. Most of your attention is spent outside surveying the rolling hills, lonely ranch houses and myriad stars. The big dipper rises to your left, reflecting off the ocean, and the drone of the engines are a sweet lullaby.

Scanning the panel again, you recognize that the left fuel tank is lower than the right. You decide to cross feed some fuel from the right tank to balance out the tanks. Once the fuel balances, you move the fuel selectors back to normal and continue on your lonely vigil up the pacific coast.

A yaw, burble and shake awaken you from mediation as the instrument panel lights quickly come on and the panel is scanned. Before the problem is solved the plane yaws to the right, just as you are about to step on the left rudder, the plane surges to the left, before yawing back to the right. As perspiration wets your forehead and hands; the right engine quits. Training in single engine procedures is starting to pay dividends when the left engine surges and quits. The plane is quiet. Only the whistle of the wind and the thump of your heart is the paralyzing soundtrack of the next couple of minutes.

A similar incident happened to a commercial airline flight in 2001. An Air Transat Airbus 330 was traveling across the Atlantic when the pilots received a low-level fuel warning in the right wing tank. Thinking the problem was a fuel imbalance, the crew transferred fuel from the left wing tank to the right. Unfortunately the problem was not a fuel imbalance, but a fuel leak in the line to the right engine. The crew transferred their usable fuel from the left tank out of the leak in the right fuel system. The above scenario and incident could have been prevented using a skill learned as a private pilot, using a navigation log.



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During private pilot training, most experience the nav. log as a cluster of confusing numbers and procedures. Between flashbacks of high school algebra and slide rules, we forget why we are filling it out in the first place. There are two primary purposes of a nav log: dead reckoning (DR) and fuel planning. In order to accomplish these one must establish the heading, groundspeed, time, indicated airspeed, power setting and fuel flow for the flight.

The importance of using a nav log for fuel planning has already been shown. But, being able to DR is just as important. DR is a form of navigation that uses heading, speed and time to determine your location. In the era of GPS it is easy to relinquish DR to the navigation of Christopher Columbus. But DR can save you whether flying IFR or VFR. A catastrophic electrical or avionics failure can make DR the only chance to escape instrument conditions when in IMC. An unintentional flight into instrument condition or a night flight where one inadvertently flies over an under caste cloud layer forces the VFR pilot to rely on dead reckoning.

In the next series of articles, The Instructor's Corner will examine how to produce an effective and accurate navigation log. Only after a clear nav. log is complete can a pilot fly his plan, accurately identify changes and make informed decisions on the progress of the flight. If the Air Transat crew merely looked at the planned fuel remaining compared to the actual fuel remaining, they could have foregone testing the glide characteristic of an A330. Your test might not be as successful.

**Don't forget to bring in some canned food for our holiday food drive.
Happy Holidays!!!!**