



THE
SNAKE
RIVER

"RIVETING NEWS"



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Where We Meet:

We rotate between the ISU hanger at Pocatello Airport and Aeromark at Idaho Falls Airport on the 3rd Saturday of the month at 6pm from September through May. No meetings during June, July, or August - but we do have fun activities going on...so check out our schedule!

March 2009 Meeting was Saturday, March 21, 2009 in Pocatello @ the ISU Maintenance Hangar. Started at 6 PM.

Refreshments were available.

Mr. Gary Wickland from the NOAA Weather Office gave a fantastic evening course on "WEATHER CONDITIONS 101"

It covered topics like: What can you live with and what should you avoid in VFR and can you stay in VFR. Slides of clouds and weather. Pamphlets were available at the meeting also.

UPCOMING EVENTS & 1ST SATURDAY BREAKFASTS (or lunch!)

April 4th: Come fly/drive up to Alpine for a terrific lunch at the Bello's Italian Grille. Alpine is located at the east end of Palisade Reservoir approximately 50 miles from Rigby, IF, or Blackfoot. Nice paved runway, Tie-downs (bring own rope), fuel for \$3.75/gal, and a 15 minute walk to the restaurant. Meet at the Alpine Airport by 11:00 AM. (drivers meet there also). Identifier is 46U. Runway is 5,800 feet. Elevation: 5,600 ft.



May 2nd: Here we come Jackpot! "...the best breakfast buffet you will ever see". It is about a 5 minute walk from the airport right in town. Meet at the Jackpot Airport by 9:30AM and come hungry! This is always a treat. Identifier is 06U. Runway is 6,200 feet. Elevation: 5,200 ft.

(cont'd) :

June 19th-20th: This is a marvelous trip up to West Fork, Montana (5 miles SW of Conner, Montana near Hamilton). Friday evening dinner and Saturday morning breakfast is available in their superb restaurant! If you're planning on staying in a cabin, the lodge, or RV site, please call Tex Irwin for reservations @ 406-821-1853. Tents, you can just show up! This is a "popular destination" so reservations need to be made as soon as possible. Identifier is 4U7. Runway is 2,600 X 65 feet & turf/gravel in good shape. 100LL available. Elevation is 4,200 ft. Its 193 air miles from Id.Falls. Call Larry Hobbs 523-9597 <http://www.westforklodge.com>.



Tenting & RV Camping Area



View of Runway & Fueling Up Planes



Outdoor showers and bathrooms on site



View of Main Lodge & the Cabins

GROUND SCHOOL
BEING TAUGHT BY
OUR CHAPTER
MEMBER "JIM WOLPER"



I'd also like to announce that I will be teaching an IFR ground school through Av-Center in Pocatello, starting March 31 and going 8 consecutive Tuesday nights. I doubt that the Av-Center will give our members a discount, but some might be interested. The cost is \$140, complete (I'll be using FREE FAA textbooks).

...hey, you wanna fly in the clouds? Here is your chance!!

COUNTDOWN TO
OSHKOSH IS
127 DAYS & 10 HOURS

ENTERTAINMENT THIS
YEAR IS BY THE
DOOBIE BROTHERS &
JEFF DUNHAM

**FORECLOSED BY
JIM WOLPER**



Southeast Idaho has been spared the worst of the housing crisis, but not spared completely. Recently, we realized that the neighbors' dogs had stopped making a mess of our yard. Then we realized that the house was dark all evening. Then we noticed that their trailer and pickup were gone. Had they moved? Why was there no "for sale" sign? I investigated: They had lost the house to foreclosure.

I hope your situation is better, but admit it: You're flying less, aren't you? It's time to think about how we're going to keep our flying sharp. Here are some suggestions that I know work, but they require some discipline.

Many years ago, I was a new assistant professor with a wife still in graduate school. My salary was low and the expense of supporting two households was high, so money was tight! There was certainly no way that I could continue to put in the number

of hours that I was used to.

I figured that with a little luck I might get to do one or two longer cross-countries each year. I decided to focus on currency and proficiency. So, once a month I found a pilot-friend to act as safety pilot while I practiced instrument work. Then I returned the favor, logging a little second-in-command time while watching for other airplanes.

I learned a lot watching others fly. One big lesson for me was watching my friend, under the hood, unfold a chart so that it covered the panel. With the gyros hidden we went into a spiral. From then on I always unfold the chart on my lap.

Every couple of months I took an evening for night proficiency, a short cross-country and at least three full stop landings.

So far, I had flown 15 hours in a year, but I was always legal to take advantage of any flight opportunity that came along. When I was invited to talk at another university, I filed

IFR and flew there. A few times, I flew to another university 100 miles away to browse journals that weren't in my local library. That was tax-deductible flying, to boot!

As a private pilot, paid flying was out of the question, but I had a standard offer to my friends: I'll take you flying if you buy me a nice dinner. So, Tony and Wanda and Dean and Dave and Kendall and Buzz and others took me out to dinner after fun sightseeing flights. I paid for the flights, but the budget wasn't so stretched because they paid for dinner.

I spent a sabbatical year in Canada, and while I had a little more stretch in the budget, money was tight again. I got a temporary Canadian private pilot license, and most of my flying was touch-and-goes (oops, I mean circuits) in a Cessna 152. The system there is a little different, and flying by different rules added to my understanding of our rules. And it was fun. The worst part was the callsigns: (try saying India-Oscar-Sierra six times, fast). I did a little instrument proficiency, too, but in the whole year

I made two cross-country flights.

But I did something almost as good. A local group, the Canadian Harvard Aircraft Association, had access to four Harvards (the RCAF version of the T-6 and SNJ trainers), and offered a ground school at a nominal fee. There were some silly visa issues, but once those were taken care of, I made my way to CHAA's hangars once or twice a week either for ground school, or to unscrew inspection plates and clean parts or the like while the engineers gave the airplanes their annual inspection. I met some wonderful people and learned a lot about airplanes and flying, and even got a little stick time in at Harvard.

So, how can we stay sharp? If you are flying less, you need to make it count more. Trade instrument time with a friend. Stay night current. Be ready for any opportunity that comes your way. But do more than just bore holes in the sky.

Enroll in a ground school of some kind; it almost doesn't matter which one.

If you are instrument rated, or want to be someday, an IFR ground school will keep your mind sharp, and there's always plenty to learn about the rapidly changing world of IFR flight. A commercial pilot ground school will have something new for everyone; you'll learn about aerodynamics and navigation and regulations in more depth. A private pilot ground school will reinforce what you already know. Plus, you'll get to hang out with pilots. Sounds like fun!

....Jim

"What You Can Do With A Pulsar
(With some help from above)"
by Austin Moses

"Clear prop!" was the yell heard at 6:35 am on Wednesday, October 1, 2008. The plane was in front of my hangar at Blackfoot, Idaho and the hour meter (Hobbs) on Pulsar XP N460GM read 726.4. The plane was packed with luggage, tools, food and emergency equipment. Darkness still prevailed at Blackfoot and the landing light was



needed to guide the plane to runway 19 for the eastbound flight.

Take off was uneventful and I climbed out quickly in order to clear the eastern foothills at 7,500'. The route was the same as my usual one to Soda Springs for work, but today it would be much longer. Instead of leveling off at 7,500', the Pulsar continued to climb to 9,500' in order to cross the Wyoming Range just south of Afton, WY. Onward, north of Kemmerer the engine droned and as the Pulsar and I entered the valley near Big Piney, the sun was just peeking over the horizon. Our course took us north of Rock Springs, then south of Rawlins and Laramie, crossing into Colorado and passing over the Steamboat Springs area. We flew down the Cache Le

Poudre River Valley in order to avoid the highest peaks, but still had to top 11,000' to reach the Denver area. Our stop was at Longmont for fuel and bathroom, where they were very accommodating to fill the Pulsar with mogas (auto gas).

After a check of the oil and exhaust manifold bolts, we were off again, this time mostly east to circumvent the Denver International airspace, then turning southeast to Amarillo. I had planned to stop in Lamar, CO to check the exhaust manifold bolts, but they had been tight at Longmont, so when I got to Lamar, I just kept going. I crossed the large MOA (military operations area) south of Lamar, watching all the time for high speed traffic to come roaring at me, but there was none. My attempts to contact Denver Center to see if it was "hot" were not returned, probably because I was only at 7,500' and they couldn't hear me. No matter, with a light tailwind, we were doing about 150 mph ground speed and crossed the MOA in short order. Next stop was Amarillo, Texas; at

the northern tip of the panhandle. I planned to stop at a little airport that advertised mogas (Buffalo 1E7) but when I found it, I saw that it was grass. With a little trepidation I set the Pulsar down as gently as possible and found the grass as smooth as pavement. The time was only 1:00 pm mdt and we had come about 2/3 of the distance to San Marcos. I was elated! Also hungry, as I unpacked the sandwich Bonnie had made for me and wolfed it down. Greg Dodson came out from his house and fueled the Pulsar then left me to myself while I checked the exhaust bolts again. Everything looked good, so I climbed back in and started it up. Oh oh! No generator. Voltage was at 12 instead of 14 and amps were negative. I shut the engine down and started to climb out, when I noticed that the cowling cam-lock screws had not been tightened. I looked skyward and thanked my Heavenly Father that something had happened to prevent me from taking off and perhaps ending in disaster. Shakily, I took the cowling off, fiddled with the wiring, didn't find any-

thing and securely fastened the cowling this time. When the engine started, the voltage and amps came up and I continued on my way.

Greg Dodson had recommended a look see at the Palo Duro State Park (cap rock) area, south and east of Amarillo, so I flew down one of the most awesome canyons in the country. It stands next to the Grand Canyon in size and beauty, and is a treat to see from the air.

I flew on south to the San Angelo area and landed at Ducote Air Park, just west of the City. My purpose in landing there was to visit Mike Plecenik who was selling an RV6. I had met Mike six years earlier when he was selling an RV4 that I looked at but didn't have the money to buy. He was gracious enough to show me the 6 this time and we spent a few minutes visiting about it. He noted that one of the other residents in the air park has a Pulsar and wanted to see mine. It turned out to be Bob Heiser, whom I had met several years earlier at the Lawrence, KS Pulsar reunion. Mike

called Bob who came over for a visit, then I was back in the air again for San Marcos. Or almost. The voltage went down again on me and I again took off the cowling and fiddled with the wiring. Again, on start up, the voltage came up and I took off without incident.

My visit to Ducote had lasted longer than expected and not far from San Angelo it started to get dark. With over 150 miles to go over unfamiliar country in the dark, I was a little concerned to say the least, but the Pulsar droned on and the Garmin GPS 95 took me unerringly along to my destination. At San Marcos, I circled the field to get my bearings then descended for landing on runway 08. As I pulled power, the voltage dropped and everything went dim for a true night landing and the last bit of excitement for the day. The runway lights kept me straight and I managed to set the Pulsar down without damage between them and found a taxiway over to a hangar that was still open and lighted. Shaking from the excitement and exhaustion, I crawled

out of the Pulsar and again looked skyward with thanksgiving.

At the hangar, I met Travis and Shawn, two late working mechanics on the field. They were happy to take me to the motel and I retired hungry and exhausted to the San Marcos Quality Inn. Ten point three flying hours made for a long and exhausting day.

On Thursday, rested and filled with a great breakfast, we met as a group and car pooled to Fredericksburg, TX where we toured the Admiral Nimitz museum and had lunch at the Auslander Restaurant. We then drove to Kerrville, and were fortunate to tour the Mooney Aircraft Factory. After the two hour tour we drove back to San Marcos for a rest before the pizza supper and get together. Alex Kosloff and I borrowed a car and went to the airport before supper to perform some maintenance and cleaning on our Pulsars. With cowling off and screwdriver in hand, I went over every wire in the engine compartment.

Although it felt tight to the touch, the main power lead going to the rectifier had come loose and caused my electrical problems of the previous day. Again giving thanks for tender mercies, I was able to enjoy the pizza and comradery of the evening.

Friday was classroom day, and I thoroughly enjoyed the introductions and being able to finally meet Mark Brown, the designer of the Pulsar back in the 1980s. He and Greg Smith (the reunion organizer) are working on a new and larger design airplane, which they showed us during the morning. After lunch, we had the treat of listening to General Julius Braun (Retired) who worked with the army rocket development group following World War II. He showed slides of the early work with Werner Von Braun and the German V-2 rockets at the White Sands Missile Base in New Mexico and told interesting stories of rocket development up to the Redstone Rocket. Following the lecture, we worked on Rotax maintenance issues and had a demonstration on how to shim the gear box on the

912 engine. That demo alone was worth the cost of the trip to San Marcos.

Saturday was flying day and those of us with airplanes, took those who were still building up in our planes. I flew five people and added another 2.3 hours to the Hobbs meter. For lunch, we toured the Commemorative Air Force hangar and ate sandwiches in their lunch room. Afternoon was spent flying, cleaning and fueling the Pulsar for the trip home. The closing banquet was great Mexican food and presentations. I came in third in the contest of who had flown the farthest in their Pulsars. Jerry Eastman flew from the Washington DC area in a round about fashion for first place and Alex Kozloff came from Santa Paula, CA in his Rotax 582 powered Pulsar for second place. Alex and I were very close, both around 1,400 statute miles to the conference.

Sunday was up early and to the airport for take off. Skies were cloudy with the promise of more to the west. I departed San Marcos about

7:35 am and headed west, meeting up with I-10 and following it towards El Paso. The ceilings were poor and getting worse to the west, so I decided to turn northwest to Roswell, NM following my original plan for the journey home. It wasn't much better that direction, but after some scud running under low ceilings and through a couple of rain showers, I set down in Roswell for fuel. In checking the weather, a huge line of thunderstorms showed on radar stretching from El Paso to north of Albuquerque. It looked as if I was stuck in Roswell for the day. The storms were moving only about 30 mph northeast and it looked possible to be stuck for two days, so I decided to start northwest and see what I could do. I took off towards Albuquerque but was soon forced to turn more east by the rain and leading edge of the storms. The turbulence in advance of the storm was violent and several times I was thrown about the cockpit, all the while trying to keep the little plane upright.

I nearly put down in the rain at a

small airstrip 100 miles north of Roswell (Vaughn), but decided to press on and aimed the plane for Las Vegas, NM to the northeast. When within 40 miles of Las Vegas, I looked to the west and it appeared that Santa Fe might be open. Although dubious as to whether I could make it through, I could always come back to Las Vegas, which was in the clear. The saying, "go to the edge of the light" kept coming to me and I swallowed my concerns and turned westward. I called into Santa Fe and found they were VFR so continued on to the city, skirting north of the worst of the storm. Going north from Santa Fe, I was blocked by storms and turned back to the Santa Fe area. Looking west from Santa Fe, it was clearing so I turned west through a pass that took me up the wide valley towards Farmington. Ceilings were lifting all the time and by the time I was 50 miles south of Farmington, I could relax a bit and enjoy the flight. For the first time on the trip, I could let go of the stick long enough to get out my camera and take a few pictures. Up un-

til that time it had been white knuckles all the way from San Marcos.

I had planned to stop for fuel in Farmington, but I worried that I couldn't make it all the way home from Farmington, so decided to go on to Cortez, CO for fuel, which would put me 50-60 miles closer to home with a better chance of making it on one fill. Cortez was absolutely beautiful, with clear skies and a wet runway from a passing rainstorm. After fueling, I lifted off from Cortez and started the last leg of the journey. So far, I had completed nearly 2/3 of the journey in only 6.8 hours even though I had diverted long distances around the storm. The first leg to Roswell I was seeing speeds up to 175 mph with 35-40 mph tail winds. I was slowed down to 130-135 mph on the second leg, but was not prepared for the turtle pace of the third leg.

Winds seemed to be against me from the moment I lifted off at Cortez. In addition, the storm that had passed through Cortez before I landed was ahead of me now. I

worked my way northwest as best I could going through numerous rain showers with ceilings lowering to 500 feet at times. I was finally blocked to the north and forced to turn westerly toward Blanding, UT. Then I would look around one storm system and it would open up to the north, so I would try again. I finally came through the worst of it near Monticello, UT and was able to enjoy clearer skies crossing over the Canyonlands area near Moab, UT.

Again I could relax enough to get the camera out and take pictures of the beautiful red formations. Soon it was decision time, whether to go north on the east side of the Wasatch front or turn west over Price and join I-15 for the last bit. The east side was closer and I was still concerned about fuel supply, especially since my ground speed was deteriorating to under 120 mph at times; so I angled for the lowest passes of the Uintas and continued north. I needed to climb to at least 10,500' over those passes and the farther north I traveled, the lower

the ceilings were.

Finally, seeing no way through to the north, I turned west down into the Ogden area. At the last moment, a pass opened up and I was able to slip north through to the Cache Valley and Logan area. From then on, ceilings were good and the airspeed started to pick up a bit, letting me breathe a little better about the fuel supply. The last 110 miles were covered with clear skies and strong crosswinds into runway 19 at Blackfoot. Even after firmly planted on the asphalt, the weather tried its best to tip me over as I taxied to the hangar and rest from an exhausting 10.6 hours of flight. Again, I looked heavenward to thank that great being for his help.

Summarizing the plane and the trip, I have to say first that the Pulsar is a great airplane. After meeting the designer, Mark Brown, and hearing about the design process, I am more impressed. The plane is light (619 lbs empty) and efficient. It's downside is that it is small. But even

though small and light, it is fully controllable in adverse conditions, which I have experienced. With 19 gallons of fuel, it has a range of over 500 miles with reserves, and when you arrive, it doesn't break the bank to fill it. Fuel burn averages about 4.1 gallons per hour with the Prince P-tip propeller. Speed is sufficient that if you have to skirt around a storm, it can be done efficiently, both cost-wise and time-wise. Now the trip. At 1300-1400 miles, I planned to take two days. As the day going down progressed, I asked myself why. Conditions were good, I was feeling good, so I pressed on. Although I had never flown ten hours in a day before, it was like any other job; you just do it. The trip back was a different story, and I told myself that at any time I could land and stay the night, no problem. But like any work, it takes conscious effort; and with effort and perseverance, come results. Staying flexible and keeping options open are important to any safe journey. All in all, a rewarding and interesting 23.2 flying hours over a five day period.

.....Austin

GREETINGS,

Finally finished the Wings for my RV 7 today and what a sigh of relief. Started them 5-30-2008 and finished 3-14-2009. Started the Empennage on 3-29-2008 and finished it 5-23-2008. After breezing through the Empennage, I thought the wings would take a little longer but not as long as they did. I must confess they probably would have been done sooner if I hadn't spent so much time flying. From the time the Empennage was started until now I logged 249.5 hours. The wingtip pic shows the reinforcing ribs I added to make them more ridged. Aerosport called Thursday (3-12-2009) and said my new engine is ready to ship. YA-HOOO!!!!
....Larry Hobbs



A Story Seldom Told - Nate Smith

You all must have had a day where you made the right decision for all the wrong reasons. For me, last Sunday was one of those days.

Like all stories it really begins long before Sunday. I will start back in January, which is when I first saw the announcement that a large dog was in need of transport from Seattle to Denver. I am on that route and certainly could help. So it began. Week after week of attempts to make it happen, only to have bad weather, conflicts or some other natural calamity bring a halt to the attempt. During these weeks I found

that I could update my GPS data base for a reasonable cost. Mine was over two years out of date, and a new data base should surely help.

During the weeks of scrubs I worked at planning various routes to my intended transfer location of Rock Springs, WY. Alternatives were explored as different scenarios were presented in attempt to have good weather for an entire weekend along the route of flight.

Finally it happened, fair skies and light winds throughout the weekend from Seattle to Denver! Arrangements were finalized and schedules determined. Gary would fly from Auburn north to Bellevue and pick up Yeti, (a 125 pound dog) and fly to Idaho Falls, arriving about 2 pm. I would over night Yeti and continue to Rock Springs arriving about 1:00 so that Rich could return to Centennial airport near Denver before dark.

During the preceding weeks I had purchased my GPS data upgrade, only to find that I had purchased the

wrong product, and would need to revert to my old data, at least temporarily. That presents no problem just reinstall the old data.



After getting anxious for Yeti to arrive only to have several delays due to factors on the Seattle end during the delays I have planned and re-planned my trip calling flight service twice to confirm the weather. Yeti arrives just after dark.

I help a little with extracting him from the Cherokee's internals. Notice immediately that there is no seat belt restraint harness on Yeti. I had indicated that one would be necessary in my plane, since a large crate would not fit. Gary and his wife move into the Red Baron to

avoid the cold, a quick photo shot and make arrangements to hanger their plane so as to get an early start the next morning. I take Yeti, and drive to Aeromark to meet them, and provide transportation to the hotel.



Foregoing dinner with the visiting pilots I depart to the pet store to purchase the necessary restraint harness. I have the store apply the harness to ensure it fits. Yeti can wear it all night, getting accustomed to it, and one less thing for me to do in the morning. The family is amazed with the size of Yeti. My son in certain the family fabric will be ripped beyond repair by dog of that size. Staying up late in watch a kids movie, makes him so tired he no long seems concerned. I set the alarm for a lit-

tle before seven to meet another dog being transported to Denver at 8 the following morning.

Sunday morning, good weather, light wind, and overcast skies above 10,000 the entire route. I secure Yeti in the back of the pickup. As I say good bye to the wife and begin to depart the garage, Yeti is loose! Having defeated the harness he is jumping around in the back of the pickup. A quick stop to reinsert him in the harness, I depart towards the airport. Three blocks out and Yeti is loose again. No time to trouble shoot, just put 125 pounds of K9 in the front seat of the small pickup. It is difficult to find and operate the five speed gear shift, but it is a short drive to the airport.

I arrive at the Red Barron to meet Ben, a golden-doodle, about 45 pounds also destined for Denver. He fits nicely in the luggage area of the Cherokee. Yeti must go in the back seat. I settle both dogs in early, as I had nightmares that Yeti would fight getting into the plane after his all day ordeal the day before.

I had heard that a flat iron made a good tool to defrost the wings of a plane so I had decided to try it that morning. After several minutes, I decided that a flat iron on the curved surface of the wing were not a good match. I reverted to the previous method of using a hairdryer and a towel to de-ice. During de-ice, a small electric heater is also applied to the engine, for a total of about 3000 watts of demand on the 3500 watt generator, a good match. After 90 minutes of defrost and preheat I am ready to go. I close up the baggage compartment and settle Yeti into the back seat using the seat belt.

As I am doing the preflight and getting the ATIS, I hear the Saturday pilot, Gary, and his wife depart in 4255T. It was a late start for them also. Radio work done, I start to enter the route into the GPS....no aviation data base available! No problem, I can go city to city with no real variation in the route, so surely I can find the airport. I do not

really need terrain awareness, I am VFR. I complete the ritual and taxi to the depart runway. As I request takeoff clearance, new ATIS is available. The controller reads me the new information. Altimeter 30.20, winds insignificant, sky conditions OVC 080...BRAIN CRAMP!! I had filed for 9,500 ft. I can't fly in an 8,000 foot ceiling. I ask tower for a Pocatello report to confirm. KPIH is 300 ft scattered, that was not in the forecast, so I ignore the rest of the report.

Call the wife to have her meet me at the airport because I will now need to



drive. The worst case scrub, at the very last moment. As the brain loosens, I realize that 8000 ft is 12,500 ft MSL and all is a go, but I have

made the decision to scrub. The right decision, for all the wrong reasons.

As for the dogs, they arrive safely, but belatedly, driven to Rock Springs and sequentially to Denver to begin their new lives there. I had driven them as the prearranged out (in case I could not fly) - driving 12 inches AGL.



Oh, and the real reason it was the right choice? After weeks of planning and preparation, untold hours of communication to get everything ready, yet still, on that day, at that time, for that mission, I was not prepared to fly.

.....Nate

Dale Cresap's Diaries



Snowbirds 5-17-2008:
Gary Huestis suggests a flight to Great Falls on 5-17-8 to watch the Canadian Snowbirds at an air show at Malmstrom AFB. Can I find someone else interested in going to

share expenses? Dave Houck is eager to go, and the trip is on. We agree to meet in Idaho Falls at 0800. I have discussed fuel prices along the route with Gary, and a substantial savings is available at Helena, which is down in a hole, so in the end we get fuel at IDA and GTF with no landings in between. This day is beautiful, clear, and sunny, and the air is smooth, but there is some haze in the distance. Gary's GPS is out for service, so I use my hand held. I give him groundspeed updates in mph and he converts them to knots to calculate our progress. He has the flight planned, but lets me do almost all of the flying, and takes on the role of navigator and flight engineer. It is important to keep the engine temperatures in the proper range, so Gary has me adjust the climb rate to prevent overheating. Our route takes us from VOR to VOR, Dubois to Whitehall to Helena to GTF. This takes us east of Butte, where we think we see Our Lady of the Rockies on the ridge. Gary and Dave are geologists and rock hounds, so they discuss the

various formations below us. We go directly over Helena, and roughly follow the Missouri into Great Falls. This calls for steep descent at 700 to 1000 fpm. Gary takes over for the 'carrier landing' on the bluff. His estimate was 2 hours 15 minutes, and our actual is 2:14.

The Malmstrom AFB runway has been closed for years, so now it is a heliport and SAC missile base. As a result the show planes are staged at GTF. The ramp is deserted except for the 12 snowbirds, a pair of Warthogs, and the Jelly Belly [1941 Interstate]. We get a close look at these planes the public will not have.

I ask Gary if he was ever in the Navy since I am impressed with the sharp tie down knots. No. The ground crew tied them before they fueled the plane. What to do for ground transportation to the show? We had planned on a taxi, but the FBO is willing to loan us a vehicle called the "Chick Magnet". Part of me thinks that what happens in Great Falls stays in Great Falls, but it turns out to be a 1983 AMC Eagle wagon, with floppy mirrors and a gas gauge that bounces between $\frac{1}{4}$ and $\frac{3}{4}$ tank.

It is rather jumpy on starting and stopping too. The A-10 ground crew arrives, and we talk to them before heading to the show. Gary lived here, so he knows the way. We arrive 15 minutes before the first flight, and

are directed to parking with military precision. The warthog demonstration is very impressive, and it is followed by a heritage flight formation with a Skyraider. The show grounds are not very crowded, and we wander through the various static displays of helicopters and an Abrams tank between flights. A fire crew gives a Jaws of Life demonstration on an old car. There isn't much to see since the fire crew has their backs to us, but one of the tank crew members told me they asked the firemen what they were going to do with the car when they were done. They had no plans for it so the tank crew asked for the next crack at it. The tank came in at 35 mph, which is not very fast, but even at that speed turning sideways to skid to a stop is impressive in a 61 ton vehicle.

The tank demonstrated gun stability by keeping the turret stationary over a rotating hull, then gave a jaws of death demonstration by running over the car twice. Between acts I spend some time talking to snowbird pilots - they are easy to spot in red jumpsuits.

The next flight was a dead stick descent from 6000 AGL by the Jelly Belly Interstate. This was an amazingly graceful flight with spins, loops, and rolls. The Snowbirds are next and put on a beautiful flight demonstration. Both of these acts used an Enya soundtrack, which seemed fitting for the graceful flight. I have seen the Blue Angels and Thunderbirds before and now I have

seen the Snowbirds, and I enjoyed all three. They have a standard 9 plane formation, which they rearrange into several shapes. There are several spreading and converging routines, and opposing solo passes as well. This lasts 30 minutes, and then the show is over.

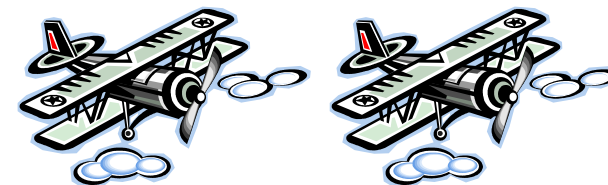
There is the usual post-air show traffic jam, and while we are stuck we discover the "Chick Magnet" doesn't live up to its billing. It is after 1900 by the time we take off, and we fly a different route home, further east, over Canyon Ferry Lake, Townsend, Three Forks, and Ennis Lake. This time we fly compass headings and landmarks rather than VORs.

Our route takes us by Big Sky as the sun sets, but we are making good time, crossing the Centennials and into the black abyss of the Snake River Valley as we head for Dubois VOR. Will we make it to IDA in time to get fuel? It is about 2100, and Gary wonders if Aero Mark closes at 9. I think 9:30 and suggest he call them on the radio. They say 9:30, and I note we have over 30 miles to go, but we are making 180 mph on the ground.

By now we can see the lights of Idaho Falls in the distance. This takes a little longer than 10 minutes since we have to slow to approach speed and fly a pattern, but we arrive with time to spare. I turn on the rabbit and Gary

takes over to land. The return flight lasts 1 hour and fifty seven minutes. The fuel guy is waiting to direct us into place. Gary believes in mathematical precision in financial matters as well as navigation, but I hand him and even amount in cash and tell him to keep the odd 83 cents. This has been a delightful adventure and a total aviation day with several firsts.

.....Dale



SUBMITTED BY LES STONE:

It's amazing what computer graphic artists can create. Attached is a re-creation of the USAir flight that made an emergency landing in the Hudson river, takeoff to touchdown, with ATC radio transmissions. This gives you a perspective of how quickly the US Air crew had to react to realize the outcome they experienced.

<http://www.youtube.com/watch?v=imDFSnkIBOk>

Broken Glass

Are glass panels better than the 6-Packs, center stacks and engine gauges they replace? Are they more reliable, more accurate, more cost affective?

The legacy airframe manufacturers have concluded that new aircraft MUST be equipped with glass panels to be salable. Hawker-Beechcraft, Cessna, Cirrus, Diamond and Mooney have adopted variants of the Garmin G-1000. Piper remains largely committed to Avidyne which is typically interfaced to a pair of Garmin 430W's. Without doubt Garmin has replaced Bendix/King as the preferred supplier of avionics, communication and navigation equipment to the single and light twin engine segment of general aviation. While Garmin's penetration of new build aircraft is HUGE, Bendix-King overwhelming owns the panels of the current fleet.

Over 85% of all aircraft which are equipped with electrical system have Bendix/King radios. The retrofit market is preparing for a huge move to glass. That is afterall what we all want, isn't it? The retrofit market is much larger than the new build market. In a world where an entry level Cessna 172 is priced at \$297,000 most of us (yes, me included!) will never know the pleasure of owning a factory new aircraft.

The G-1000 is clearly the 'gold standard' when it comes to glass panels. Let's compare it to a 6-Pack/Bendix/King/steam gauge set up.

The 6-Pack wins round one, price, easily. The closest thing to a G-1000 that you can purchase is the G-900. It is effectively a G-1000 sold exclusively to the experimental, homebuilt market. The base price is \$64,950 uninstalled. If the G-900 was approved for installation into certified aircraft the price would be a great deal more.

Let's set the stage for a reliability comparison. How about a moonless night and just to make it fun let's put you into hard IFR with rain and moderate turbulence. You can barely see the prop and things are really bouncing around. Then you lose your electrical system - TOTALLY! For a brief moment a BIG Red X fills both the MFD and PFD

screens of the G-1000. Bummer! Everything is gone! No more radios, no engine instruments, no GPS, no kidding!

Can a G-1000 really experience total failure? You bet. Jay Honeck has posted a wonderful chronicle of a trans-Atlantic flight which encountered just such a failure. Steven Rhine was flying a brand new Cessna 172 on a leg from Goose Bay, Canada to Narsarsuaq, Greenland. He saw the Big Red X while cruising in the soup, at night, 200 miles from the nearest land. His G1000 display suddenly went black, with white text in the left hand corner saying "initializing system"! First he went to 13,000 feet to get above the clag then he declared an emergency and returned to Canada using a handheld radio and a portable GPS. He was greeted 60 miles offshore by a Canadian search and rescue chopper that guided him to the airport. Lucky, lucky man! The entire story is here: http://www.alexisparkinn.com/nwpiot's_tranatlantic_flight.htm (you may have to cut and paste this link.)

All G-1000 equipped aircraft have three backup flight instruments, an airspeed indicator, an attitude indicator and an altimeter. Let's assume they are in a position where you can easily read them unlike the odd placement in the Mooney Acclaim or Hawker-Beechcraft G-36 which are on the extreme right side of the panel. The good news is the airspeed indicator and the altimeter which are both powered by the pitot static system will continue to provide information for as long as you are aloft. The heading indicator, which must now run on its backup battery, will say goodbye in about 45 minutes. Never fly without a handheld radio, a flash light and a portable GPS.

What would happen in the same aircraft equipped with a 6-Pack? You would lose the turn and bank, AP and all avionics. Some engine instruments would continue to operate. Keeping the pointy end forward and the shinny side up would be no problem as most of the primary flight instruments would still be functioning.

Both the G-1000 and the 6-Pack/BendixKing system use a pitot static system for input. They would be equally affected by the loss of that system. Once again the 6-

Pack would continue to provide reliable attitude information.

The 6-Pack's Heading Indicator and Attitude Indicator rely on a vacuum pump for power. Lose vacuum and things get interesting. Never fly a plane that doesn't have a standby vacuum system. The backup gear is very affordable. Even if you do lose those primary gauges the 6-Pack provides backup and you have been trained to work around their loss.

I have a bias favoring simplicity of design and segmented rather than integrated systems. Having spent years in the computer business I know how quickly software can bite you and I know how hard it is to completely debug a system before it hits the field. Having to hit Ctrl, Alt, Delete on a laptop's keyboard is annoying. Having to reset your aircraft's total command and control system in flight is scary dangerous. Cost and reliability go to the 6-Pack. Accuracy is the domain of the G-1000.

What about data overload? In many ways those big G-1000 screen presentations bring too much information. They keep the eyes of the pilot inside the cockpit. While it isn't difficult to use the system it certainly requires more attention than a 6-Pack alternative. The G-1000 brings a lot to the party but no more than you can have in more reliable segmented solutions.

The reason all modern airplanes have two comm. radios in the panel is critical component backup. Reliance on one system in an aircraft has long been recognized as an errant solution. We have two magnetos and two sets of spark plugs. If one fails the engine keeps running, if one radio goes we the other. For me the G-1000 fails the test of IF.....

This eBurger is now posted on Blog area of the Burger. To make a comment, simply go there, bring up this article and click on Reply To This Post at the end of the article. Fly someplace today. You've earned it!

John Purner, Publisher
The \$100 Hamburger
www.100dollarhamburger.com



For Sale:

CHALLENGER I · \$8,000 · LIGHT-SPORT AIRCRAFT FOR SALE! · Challenger I, N#, ELSA, nice plane, 95 hours, will do fresh annual, doors, speed struts, fiberglass nose, 99 kit, built 05, registered 07, 10 gallon fuel, 3gph burn, 447 engine, wood prop, flaps, BRS chute, elec. start, strobe, heater, hangared in Rigby Idaho, Stan Fenn, 208 528 6433.

For Sale:

1993 AVID HAULER. Very good condition. Plane is currently stored inside a hanger on it's trailer. It is currently set up with a two-blade prop, but has a spare blade and can be converted to a three-blade configuration. There is a spare tow-bar so the plane can be towed without being placed on a trailer.

There is a box full of paperwork for the plane including the original construction literature. Engine is actually a Rotax 582 since they never made a 532 engine. The Ballistic Recovery Parachute System is installed; condition is unknown. Price: \$13,500.00 OBO. Contact Don Snyder @ 208-305-3238 or 208-743-0293.

For Sale:

Sonex for sale. 87 Total Hours on the Airframe, Propeller, and Power Plant. The Engine is an 80HP Aerovee Scratch built and inspected on May 29, 2007. Blue print #179, N# N179ES.

Engine: Aerovee-S/N 0257; Carburetors: Aerocarb, S/N 555IP; ACV-C03, Com Radio: Becker 12206; Transponder-Becker 0338; ATC 440A-A-250 ELT King 481558 King Ak450; Propeller-Senenich W54JVS144G Encoder AKC 103086;

Engine Information System-Grand Rapids 2000. Tires-11X400XS; Altimeter-Falcon 103089 ATL201NF-3; VSI UMA 10-05500 Airspeed A2241; Compass Airpath C2400LP4. Have to see to appreciate @ \$35,000. Call Elmer W. Smith @ 208 604 0419 or Mark L. Edwards 208 241 1865.



For Sale: 30 amp ammeter, Westach, installed but never used - \$50. 12" spinner (uncut) w/ 5/8" mounting holes - \$100. Airwolf spin-on adapter for remote firewall mounting for a Lycoming or Continental engine, including AN-8 size nipples & O-rings for 1/2" oil lines, separate firewall mount required which can be purchased from an auto supply store - \$250. Turn & Bank indicator (Schwien), runs quietly - \$75. PS Engineering 4-ch panel mt intercom, no harness-\$50. Lycoming vacuum pump drive, appears to be P/N LW-10305 - \$100. Call 208-317-4101.

For Sale: One-fourth share of an ATEC Faeta LSA located in Rigby, Idaho. Plane has approximately 100 hours total time. Has the 100 HP Rotax engine. Initial investment is \$1900 and the cost of the one-fourth share is \$33,000. Financing is available. Contact Mike Green, Fox Nine, LLC. 208-652-7586

For Sale: ACS Fuel primer with adequate Cu tubing, Spruce 05-19920 - \$45.00. "Usher" type Cab heat box [2in tubing], Spruce p 295 2005/2006 cat. -\$75.00. 2 inch tubing to sheet metal Al flange - \$3.50. Exhaust cabin heat "valve" for \$25.00. A-820 type throttle friction-lock cable, 1/2 thread, 6 ft, 0.075 solid wire - \$25.00. 2 ea. Mixture/etc, 48 inch, 3/8 threads, 0.06 die solid wire - \$15.00 each. Potter/Broomfield Breakers: W58 type, 4ea 1amp; 3ea 3amp; 5ea 10amp - \$3.00each. W23 type, 2ea 10amp; 1ea 15amp - \$7.50each. All items are new and never been used. Call 523-8132 or 520-6671.