

CASCADE FLYER



Banner Photo: Jack Kobler

CENTRAL OREGON • OREGON PILOTS ASSOCIATION NEWSLETTER

SEPTEMBER 2002 Issue

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SEPTEMBER MEETING

This month's meeting will be on Thursday, September 19th, 6:00pm at the Bend Airport (S07) in the Flight Services building (The Flight Shop). ✈

GUEST SPEAKER

by Clay Trenz

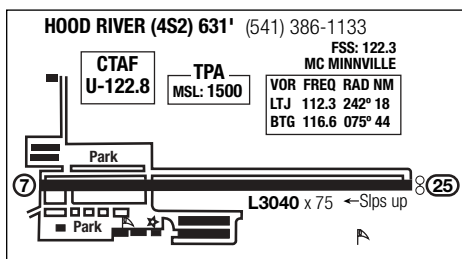
This month's speaker will be veteran aviation consultant Amy Prutzman. Amy works closely with the FAA and AOPA through contacts in Washington D.C. regarding national and state level issues. She will be describing to us many of the changes in aviation, as we know it, coming from the FAA's headquarters.

Since Amy's move to Bend, she has had an opportunity to become involved with many local aviation concerns at the city/state level. Therefore, she will also enlighten us on the progress toward any new developments at the Bend airport.

It would be great if we can all welcome her sincere involvement and expertise toward capturing new opportunities at the Bend airport. ✈

SEPTEMBER FLY-OUT

by Clay Trenz



Hood River should be very pretty this time of year and not too hot. There are many unique shops and great eateries in downtown Hood River. A nice little cafe is across the street from the airport for those who chose not to go into town.

continued page 3 column C

AUGUST FLY-OUT TO BAKER CITY



by Don Wilfong

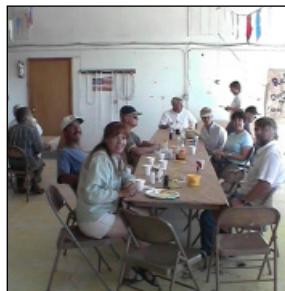
The bright, bushy tailed, boisterous, beaming, bubbling and bewildered bunch gathered at the Flight Shop at 07:00 hrs for the trip to Baker City. This select group consisted of Gary Miller and his co-pilot Kimmy (the dog) with Gary's Turbo Centurian, Mike and Marcia Guth in their Lancair 4P and Don and Norma Wilfong in their Skylane. Steve and Bobbie Wright, in their pretty yellow and white 175 Cessna Skylark, departed from the Pilot Butte Airport and met us



"Welcome to Baker" and Don's Skylane.

in the air. Their plane has a 180 hp Lycoming engine with a constant speed prop and performs quite well. The Guth's Lancair left us all as if we were standing still and made it to Baker City in 37 minutes which was about half the time the rest of us took... boy what a beautiful plane... the people at Baker City had them move it to a spot, right up front, where it could be admired by everyone.

We enjoyed a great breakfast with eggs, ham, blueberry hot cakes, coffee and juice. After breakfast we wandered around and admired some of the many planes. The Guths then headed for home as they had out of town guests coming and couldn't stick around. The rest of our group loaded up in a van and they hauled us up to the Interpretive Center. It was really interesting to see what the pioneers had to go through on their journey west. There was too much to see in the time we had allotted ourselves so Steve and Bobbie stayed an extra hour



Everyone enjoyed their blueberry hot cake breakfast.

continued page 2 column B

HANGAR FLYING



by Joel Premseelaar

In the late sixties, the US Air Force Flight Dynamics Laboratory contracted The Boeing Company's Military Airplane Systems Division to develop a fighter/attack cockpit employing advanced avionics including newly developed digital concepts. One other and I, as senior engineer, were the only aviators on the team. We were delighted with the opportunity to participate in a "no holds barred" project that allowed us to include energy management. If you are really interested in the procedure we used to design the fore runner of cockpits found in the F-22 and other present generation aircraft, I have a copy of the report you may borrow or you may corner me for a Bravo Sierra session when you can spare an hour or so.

After the aforementioned program's report went to print, an Air force officer, I'll not name in print, laid claim to the "energy management" concept. Factually, A. Lippisch of ME-163 fame conceived of it toward the end of WW II. It's kinda like "did Adam have a navel?" O.K., relax folks. I'll expose my receding hairline by removing my engineer's hat and try to express energy management in laymen terms.

After WW-II, we devised four-dimensional (includes time) performance envelopes for various combat aircraft. The parameters included trade-offs for vertical flight regimes vs speed vs rates of change, and four-dimensional acceleration. We employed tactics designed to force the enemy to engage within the sphere of energy management that favored our aircraft and certainly not theirs. We took note of the fact that during the Korean "Police Action," kill ratios against Mig-15s favored the F-86 at the lower altitudes. We studied how best to avoid "coffin corners."

Of course, we G.A. types not going to engage in air-to-air combat, are we? ARE WE?? Our energy management challenge is to optimize performance. If the purpose of your flight is to obtain maximum endurance, then fly at the equivalent airspeed (EAS [more about EAS in a later writing]) where, for a given density altitude, horsepower (HP) required

continued page 3 column A



YOUTH CHOIR OF CENTRAL OREGON

by Amy Prutzman

The Youth Choir of Central Oregon (YCCO) is presenting ideas for the cooperative activities with the aviation community during the monthly CO-OPA meeting on September 19th. at the Bend Airport. This year, the choir is investing in the area's youth by orchestrating participation in Italy's prestigious Tuscany International Festival in July 2003.

Choir representatives will also be on hand to talk with CO-OPA members about their "Voices Take Wing" program - They will be asking for ideas for activities such as plane washes, pancake breakfasts, hobbs-meter marathons and other initiatives. The goal is to combine the musical expression of the area's choirsters with a love of aviation and promotion of the importance of the airport and aviation contributions to the community here in Central Oregon. Please come to the meeting with your energy and ideas.

Contact Amy Prutzman for more information at 318-9990 or av8r@prutzman.com and check the YCCO web site at <http://www.ycco.org> ✈

RI FLASH CARDS

Runway Incursions are still one of aviation's top concerns. The FAA and AOPA Air Safety Foundation has developed a low-tech way to help remember and reinforce our knowledge of airport signage, Flash Cards! If you don't recognize the meaning of these signs maybe the AOPA Air Safety Foundation's Flash cards can help you.




Fig 1 Fig 2 Fig 3

Can you match these signs with the correct choice?

A. Critical Area Holding Position Sign: ATC may hold you at this sign, on a taxiway...

B. Runway Boundary Sign: This sign faces the runway and is visible to pilots exiting the runway.

C. Taxiway Location Sign: Indicates the taxiway you are on.

The front of each card displays a typical airport sign or pavement marking. The back not only explains it, but also what action the pilot should take. You can download these helpful flash cards and other valuable information by following this link; <http://www.aopa.org/asf/flashcards/index.html> ✈

August Fly-Out from page 1



Posing for the Oregon Trail Interpretive Center photo-op

and returned to the airport later. Another visit will be in order, as we really didn't have time to appreciate everything.

The lady who drove us there and picked us up dropped Gary, Kimmy, Norma and I off at a restaurant for lunch and then picked us up, a little later, (in her electric car) and drove us around the city showing us some of the grand old homes and buildings from 100 or so years ago. This just whetted our interest and we want to return and spend much more time really looking the entire Baker City area over. There is a lot of history in that area. We actually saw some of the Oregon Trail where the old wagon road, out through the sage brush, still shows up. There was a lot of mining in the area too with many things to see.

Steve and Bobbie Wright rode their bikes into town to see the sights and enjoyed a nice dinner, then camped on the field overnight and flew home Sunday morning. We (the Wilfongs) had planned to camp overnight too, but had to get back and take care of some business so we headed home Saturday afternoon. Gary and Kimmy flew to La Grande and Monument to add a couple more Oregon airports to Gary's growing list of accomplishments. I believe he said he has now landed at over 40 Oregon airports.

My thanks to Clay Trenz for his help in making this another fun outing. I was surprised that we didn't have more people show up.....but as usual those who did had a very good time. You are missing out by not participating in our fly-outs. Really our group has a pretty good bunch of people that always seem to have a lot of fun together.

Don Wilfong dwnw@bendnet.com ✈

If flying is so safe, why do they call the airport the terminal?

CALENDAR OF EVENTS

SEPTEMBER -2002

- 7 Sept. [EAA Pancake Breakfast](#) - Twin Oaks Airport
- 7 Sept. John Day Fly-In and Breakfast Grant County Regional Aiport (John Day) 541-575-1563
- 14 Sept. Expo Center, Albany - OPA Quarterly Meeting Dale Evans
- 14 Sept. 10-2 p.m. OPA Corvallis Fly-the-Kids, Corvallis Airport, John Gaylord CVO 541-745-5088
- 14-15 Sept. [Oregon Air Fair](#), Albany Fairgrounds (next to airport) Gwen Morrow
- 19 Sept. 6:00pm Flight Services Building, Bend CO-OPA Monthly Meeting
- 21 Sept. Flight Services Building, Bend CO-OPA Flyout to Hood River

OCTOBER -2002

- 5 Oct Twin Oaks Airpark, Hillsboro, OR, Fly-In Breakfast - EAA#105 (503.646.8763)
- 17 Oct. 6:00pm Flight Services Building, Bend CO-OPA Monthly Meeting
- 19 Oct. Flight Services Building, Bend CO-OPA Flyout to ???
- 20 Oct Fall Festival at the Museum, Pearson Air Museum, 13:00-16:00 John Nold, (360.694.7026)
- 24-26 Oct AOPA 2002 Expo, Palm Springs, CA (888-GO2-EXPO)

NOVEMBER -2002

- 2 Nov Twin Oaks Airpark, Hillsboro, OR, Fly-In Breakfast - EAA#105 (503.646.8763)
- 9 Nov. 10:00am Lebanon, OR - OPA Annual Meeting Dale Evans
- 21 Nov. 6:00pm Flight Services Building, Bend CO-OPA Monthly Meeting
- 23 Nov. Flight Services Building, Bend CO-OPA Flyout to ???

DECEMBER -2002

- 7 Dec Twin Oaks Airpark, Hillsboro, OR, Fly-In Breakfast - EAA#105 (503.646.8763)
- 8 Dec Christmas at the Museum, Pearson Air Museum, 13:00-16:00 John Nold, (360.694.7026)
- 19 Dec. 6:00pm Flight Services Building, Bend CO-OPA Monthly Meeting
- 21 Dec. Flight Services Building, Bend CO-OPA Flyout to ???

OTHER CALENDAR PAGES

- [Oregon Pilots Association Events Calendar](#)
- [Washington Pilots Association Events](#)



Hangar Flying from page 1

vs HP available is greatest. This is just before the region of reverse command; i.e., just before it begins to take more power to fly slower. On the other hand, if you wish to maximize range (no wind) and expend the least amount of energy (fuel), fly at the altitude/power settings for maximum range. What does this problem tell you about gliding in the presence of wind? On your E6B; compute the elapsed time for a round trip from A to B, a distance of 100 nm each way (zero time to reverse course) at a TAS of 100 kts. Now compute the elapsed time with a ten-knot tail wind one-way and then, with a ten-knot headwind on the return leg. The reason for the surprising difference is that you were bucking the headwind longer than you enjoyed the benefit of the tailwind. Just to give you a chance to exercise your gray matter, I'll leave the solution for obtaining an equal time of flight for each leg, to you. A hint: what would you do if the headwind equaled you airspeed? Finally, yet importantly, where the HP required vs. the HP available is equal, you obtain maximum speed.

You have the capability to manage level flight energy. You need only to select any set of parameters between stall in the region of reverse command to the juncture of HP required with HP available for horizontal flight. A test pilot flying a perfectly rigged new unpainted aircraft with no dings sporting a new engine tuned to a "T" produce the numbers found in your handbook. For example, to minimize friction, take off distances are conducted with pumped up tires. Do you believe that the machine you fly can meet handbook numbers? Do you believe in Santa Claus too? Instead of just boring holes in the sky, why not make like an aero engineer? Construct power required vs power available curves for the aircraft you fly. Use specific weights, center of gravity (c.g.) locations, and pressure altitudes. You may be surprised how much an aft c.g. will buy BUT, stay within the safe envelope. Develop dots on graph paper for your power available. Fly a constant altitude (trimmed flight please) at max power until the airspeed stabilizes; record the speed and power required to get max speed. Keep doing this down through the region of reverse command to a full power on stall. Regress to your childhood by connecting the dots with a French curve. Join points to establish HP Available curve. Join points to establish HP Rqrd. curve. After faring in the dots your picture should be similar in appearance to the one in the graph (Fig 1). Note where max endurance and max range lie.

Energy management in the vertical plane includes, to name but a few: rate of "G" change, Vx, Vy,

minimum fuel climb, and maximum range cruise. Whoops, isn't that last one horizontal flight? Nope, not in terms of energy management 'cause, at a

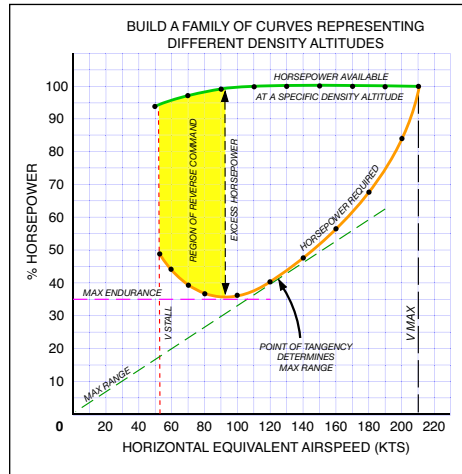


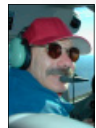
Fig 1

constant EAS, the reduction of weight as fuel is consumed will cause the aircraft climb and, consequently, you'll enjoy an increase in TAS.

Lateral energy management is also possible. High rates of roll and steep bank angles exact a toll on performance. However, recent energy management research indicates that using a 45° bank angle for a dead stick reversal will result in a minimum loss of altitude.

It's actually, you know, like all about old Sir Isaac's Principia and his laws of gravitation. ✈

CHECK THIS OUT



by Jack Kohler

Surprised would be an understatement! To receive the OPA's 2002 Best Chapter

Newsletter award was quite an honor (not to mention this little hangy down thing for my CO-OPA name tag too). I would like to thank everyone who has made contributions to our newsletter and a special thanks to Joel Premselar and Don Wilfong who have provided content for us every month. It has been a privilege to be a part of CO-OPA, we can all be proud to have received this award. ✈



September Fly-Out from page 1

Several attractions in/around Hood River include the Fruit orchards, Hood River Locomotive Rides and The Carousel Museum. Don't forget about those amazing wind surfers on the Columbia River!

Hood River Taxi says they will pick us up at the airport in a van. Cost is \$1 per person for a pick-up fee and \$1.90 per mile for the whole van thereafter. However, we must call them to arrange before we leave Bend airport.

Hood River Taxi: 541-386-2255

Twin Peaks Cafe: 541-386-4460

(Across from field)

Have a great meeting and flyout!!! ✈

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For members only lists: User Name: S07
Password: 123.0

PLEASE REMEMBER TO FLY FRIENDLY

