

Experimental Aircraft Association

Chapter 105 Portland, OR

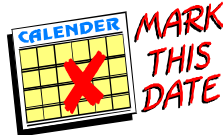
Twin Oaks Airpark—7S3 www.EAA105.org

The Purpose of EAA Chapter 105 is to Promote Aviation Education, Construction, Recreation and Safety for Enthusiasts of All Ages.



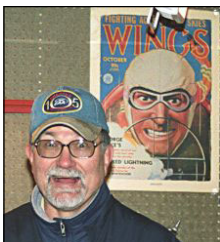
Next Meetings

- **December 16th** – Chapter Meeting: Note FRIDAY meet at Casa de Hickman, Dietz Airpark, Canby, OR
- **December ??th** – Board Meeting: No Board meeting scheduled for December. (Yea!)



Newsletter Deadline

- **December 16th** – Newsletter article contributions and ads are welcome anytime, but may be held to a later issue if received after the deadline.



122.75

J. Rion Bourgeois, Chapter President

New Chapter Project

Woody Hall's sister, Julia Hall Sneed, has donated her electric golf cart to the chapter. This is an especially timely and useful gift

since the closest bathroom is about 400 yards from the new project hangar. It has not been run in some time, and needs to be inspected and repaired as needed. The first order of business seems to be to clean and inspect the wiring and terminals, check the batteries for fluid, and charge it. Anyone with the requisite experience or desire please let me know.

Project Hangar Update

Speaking of the project hangar, the concrete flatwork has been completed, and the finishing of the interior has begun. Be sure and walk down to check out the progress at the December breakfast.

Breakfast News

Speaking of the chapter breakfast, we are in need of a crew chief or two. To qualify, you must be willing to serve at the breakfast on a fairly regular basis. Obtaining a food handler's license (a VERY simple process) is recommended but not required. Breakfast crew chiefs receive their own personal apron with monogrammed call sign.

Trivia Question

What former chapter president helped build the aircraft that currently holds the world speed record for four cylinder aircraft, and what was the aircraft? The answer will appear in next month's newsletter, along with the names of everyone who

Update Your DB Info

Randy will send out your database records along with the notice for this NL. Send corrections back to him, for inclusion in the upcoming roster booklet distribution.

Breakfast KP Duty

Saturday, December 3rd, 2005

| | |
|----------------|----------------|
| 7:00 AM | 9:00 AM |
| Keith Gover | Paul Johnson |
| John Halle | Charles Kaluza |
| Jeff Jasinsky | Bill Kenny |
| Steve Johansen | Martin Koxxy |
| Steve Johnson | Peter Lang |
| Randy Lervold | Glenn Longley |
| Mike Murphy | Mike Murphy |

Saturday, January 1st, 2005

| | |
|-------------------|----------------|
| 7:00 AM | 9:00 AM |
| Jacie Ann Crowell | Tom Louris |
| William DeLacey | Dave Lowry |
| Steve Kautz | Jim Maddox |
| Randall Henderson | Rick Mandrell |
| Steve Householder | Ted Marks |
| John Traubosh | Robert Marilla |
| Harmon Lang | Ed Mason |

Note to Volunteers who cannot serve: Please arrange replacements for yourselves, or contact Len Kauffman. lakauf@comcast.net or 503-885-1920

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sends me the correct answer.

Signing Off

This is my last monthly column as chapter president. Randy Lervold's column and byline will be appearing in this space next year. It has been a pleasure serving as your chapter president. I would like to express my thanks to the other chapter officers, board of directors, breakfast crew chiefs, and other volunteers that made my job so easy and pleasurable. I feel that special thanks are due to the heavy lifters: Jenny Hickman, the chapter treasurer and Poker Run coordinator, who keeps the books and writes the checks and volunteers at every breakfast along with the Prince of Pork, young Brian Hickman; Benton Holzwarth, who publishes the chapter newsletter every month and produces and publishes the minutes for the monthly board meetings as newsletter editor and chapter secretary; Randy Lervold, who produces and maintains our great chapter website and membership database; Joe and Char Miller, who attend every breakfast and handle so many unsung logistical matters for the chapter; Mike McGee, who buys the groceries and then prepares the inventory every month for the chapter breakfast, and maintains the chapter tool crib; Len Kauffman, who coordinates the breakfast volunteers every month; Jim Pace, who attended every breakfast as a crew chief and handled breakfast equipment requirements; Louise Lane and Neil Arney, breakfast crew chiefs; Harvey Cheney and Tom Louris, who served as Young Eagles coordinators this year, and Tom Louris for drawing up the project hangar improvement designs pro bono; Randall Henderson, who organized and coordinated the chapter meeting every month as meeting coordinator; Jim Mitchell, who maintains and grows our chapter library; Dick, Jerry, and Stan Van-Grunsven, Jim Mitchell, Martin Koxxy, Dean Sigler, Richard Guarnero, Aaron Frechette, Louise Lane and Laird Smith for their dedicated restoration of the Little Gee Bee; Randy Lervold, Randy Griffin, Rob Hickman and Mike McGee for their work on the prop balancing crew; and Bob and Betty Stark for being understanding and flexible landlords. I would like to repeat and make special mention of Neil Arney, who is retiring from his crew chief position after eight years of dedicated service as flap jack flipper, stand up comedian, and grill cleaner extraordinaire. He also is responsible for the Teflon coatings on the grits pots which makes my own personal breakfast duty so much easier (your ribs aren't the only thing grits stick to.) My apologies to others whom I may have overlooked. They all made my experience a pleasure. I pray your new president will receive equal support.

Parting Humor

Education teaches us the rules, while experience teaches us the exceptions. The man who lives to tell the tale spends the rest of his life talking about nothing else.



EAA Chapter 105
Portland, OR — Twin Oaks Airpark 7S3

Youth Aviation Activities Raffle

Supporting our Future Aviators

One of the chapter's goals is to encourage, educate, and support youth in aviation. In addition to the Young Eagles program, the chapter will be further developing various activities for youth within the ages of 8 and 17

\$5 per ticket

Back of Jacket



The proceeds from this raffle will help sponsor a youth (12 to 17 year old) to attend the National EAA Air Academy during AirVenture 2006





Win this Jacket

The prize is an EAA Leather Jacket (size XL) with an approximate value of \$350



Tickets will be on sale at the chapter breakfasts, meetings, and Christmas Banquet

The Drawing will take place at the Chapter Christmas Banquet. You do not need to be present to win

See www.eaa105.org for details

Tips 'n Techniques



Oil Leak Tell-Tales

I saw these oil leak tell-tales on Jerry V's engine. In the past, I'd used chalk marks to spot where I thought oil might be leaking on cars, but hadn't thought about tying down a bit of rag to catch leaking oil at it's source. Consider heat levels, and don't forget to take them back off.

Safety Dog: Welding Hazard

[Here's a safety tip, extracted from a thread on the yahoo-groups Bearhawk mail-list. It's a stark reminder that sometimes what you don't know *can* hurt you -- even when you've got your two feet flat on the ground -- Ed]



>...Alright, Del--since you have admitted contributory guilt, I hereby sentence you to 10 hours of working on your Bearhawk. That should keep you away from the computer for a while...

Tried that Wednesday. Came close to killing myself.

Hey – Help keep this pump primed!

Got an idea, maybe even an idea *all the RV guys know*? Well we're not all RV guys, here! Seen a great reuse of a tool – or a misuse to avoid? Click a picture, write a few words, and send 'em in. There must be 1001 great ideas out there, and a little of Tony Bingelis in all of us. I'd like to see operational tricks, too.

Who would have known that you shouldn't weld after degreasing your parts with brake cleaner, with the vapors still in the air? Evidently, it is possible to create phosgene gas (stuff used to kill people in WW1) in that manner. Fortunately I am okay and past the danger period, must have been a small dose. I hadn't welded even a half inch before noticing that something...was...wrong. Dropped TIG torch and ran like hell out of the shop. Started searching the net to find out what the \$%^&* that was. Scared shitless does not even begin to describe my reaction upon finding out.

> Who would have known?

Well, my web searching indicates that it is actually a fairly well known welding hazard. I may even have run across it previously, but if so, that bit of knowledge had long since left me. Gave me a bit of a scare because the way the stuff works is, once you are removed from area, there is normally a 6-24 hour period of no symptoms, and then your lungs start to fill with fluid. Fortunately that did not happen to me. Also according to what I saw, survivors normally make a full recovery. Before anybody asks, I did seek medical attention. Doctor said I would be fine and don't do that again....

> Well it may be a well known welding hazard to some, but I've never heard of it before. Could you please provide some links to sites you found that talk about this? I'm curious how break cleaner becomes a poisonous gas just because of a hot spark.

<http://www.encyclopedia.com/html/p1/phosgene.asp>
<http://en.wikipedia.org/wiki/Phosgene>

<http://www.idph.state.il.us/Bioterrorism/factsheets/phosgene.htm>

http://www.ccohs.ca/oshanswers/chemicals/chem_profiles/tetrachloroethylene/working_tetra.html

> I think this is the clue (from the last link):

- Is Tetrachloroethylene stable when exposed to air, moisture, or heat?

Tetrachloroethylene decomposes slowly in the presence of light (especially ultraviolet light) and air to form trichloroacetyl chloride and phosgene, if unstabilized. The unstabilized compound also hydrolyzes very slowly in the presence of water to form corrosive trichloroacetic acid and hydrochloric acid.

- Are there any conditions to avoid when using Tetrachloroethylene?

Excessive heat, open flames, electrical arcs, welding arcs, hot surfaces or other high temperature sources, sunlight, moisture, depletion of stabilizers.

- How can I work with Tetrachloroethylene safely?

Do not use near welding operations, flames or hot surfaces because of the risk of formation of toxic hydrogen chloride or phosgene. Do not perform any welding, cutting, soldering, drilling or other hot work on an empty vessel, container or piping until all liquid and vapours have been cleared. Follow the chemical supplier/manufacturer's advice regarding chacking and maintaining appropriate levels of stabilizers.



Avoiding Bird Strikes

Joe Blank

Now that Fall is upon us, there are many additional aviation hazards lurking about attempting to ruin your day. One hazard that receives limited press are bird strikes. This time of year is a prime time for encountering birds while zooming along in your Belchfire 3000-RG, RV, or garden variety Cessna. The region we live and fly in is a main flyway for migrating birds, large and small. On a frequent basis, one can observe large flights of ducks and geese transitioning the airport environments and other classes of

airspace. Apparently these birds have not received any training on FAA Regulations and Airspace usage as they do not pay particular attention to VFR flight altitudes and headings, display required position lights, file flight plans, use appropriate radio frequencies, etc... ;-)

A while ago, I had a recent incident with a small song-bird (actually a Killdeer) during takeoff. Upon rotation, a number of them scattered from the noise a short distance down the runway and climbed vertically. As I passed by the group with just enough speed to remain in ground effect (~45-55 kts), one bird in the group did a 180 degree diving turn back towards me and impacted the aircraft. Thump! Not very loud... but I could feel it. When I landed again, I inspected the area where I

thought it had hit and found a small dent in the leading edge of my right wing. Nuts! Well it was repairable, but it could have been much worse. Fortunately, the aircraft hadn't been painted yet, so the dent was repairable. This was a cheap lesson for me in dealing with this type of hazard.

I recently found some very good information on the Avemco website that discussed this particular issue in depth and thought it wise to pass along in order to further educate us all on how to avoid an unfortunate accident with our fellow winged friends. The website listed here: <https://www.avemco.com/briefingroom/birdstrikes.asp> is reprinted below for your review. Blue Skies!

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Bird Strikes: More Than See & Avoid

It has been nearly 90 years since the first reported collision in flight between an aircraft and a bird. Cal Rogers, the first man to fly across the United States, lost his life in 1912 after a bird became entangled in the controls of his aircraft. Since the number of aircraft and birds alike has risen dramatically since 1912, the risk of encountering a bird while in flight is even more probable today.

One need not be a physicist to understand the potential destruction that can result from colliding with an object in flight. The average duck weighs from one to four pounds and the larger geese, swans and cranes can weigh between four to 25 pounds. At an airspeed of 125 knots, the force of impact of one of the larger birds could approach 100,000 ft./lb. of energy. While many transport aircraft are designed to withstand bird strikes, little

thought of bird strike survivability is incorporated in the design or manufacture of most small, general aviation aircraft. The importance of avoiding birds altogether cannot be overstated.

A few facts to consider:

- September 1997: A student pilot on his first solo flight struck a mallard duck. It penetrated the passenger side windshield of his Cessna 150 and struck the rear cabin wall.
- October 1997: A Cessna 172 struck a mallard duck and the bird penetrated the windshield. The pilot suffered facial lacerations and a fractured nose but managed to land the airplane.
- June 1997: A Vans RV-6 struck a bird at 100 feet AGL during a go-around. The bird penetrated the windshield and struck the right side of the pilot's face. The pilot was able to execute an immediate emergency landing but the aircraft nosed over in the soft field, causing over \$30,000 in damages.

Bird strikes not inevitable

Many pilots assume that a bird strike is an unavoidable and unmanageable risk, akin to being stuck by a meteorite, and as such bird strikes are accepted as just another remote hazard of flight. This doesn't have to be the case. There are very simple and effective steps you can take to minimize the risk of a bird strike.

Take some time to acquaint yourself with the attached bird avoidance guidelines and be fully aware of the conditions that will increase the likelihood of encountering a bird in flight. Since 80 percent of all bird strikes occur with the airport environment and below 1500 feet AGL, the time to be most vigilant is during the take off and landing phase. There are also two major seasons of bird migration, Spring and Autumn, when you should carry a heightened awareness of the possibility of a bird strike.

As always, the key to a safe and successful flight begins in the planning stage:

- Check airport documentation and NOTAMs for information about permanent or seasonal bird problems at

both departure and destination airports. Review published migratory bird information to determine the risk of encountering birds en route. Web sites such as www.ahas.com (Avian Hazard Advisory System) provide a wealth of migratory bird information and provide links to the United States Bird Avoidance Model which is a helpful tool to use in determining the level of risk. In Canada, known migratory bird routes and staging areas are published in the AIP.

- Plan to fly as high as possible. Only 1 percent of general aviation bird strikes occur above 2,500 feet.
- Avoid flying over bird and wildlife sanctuaries, landfill sites and fish packing facilities.
- Avoid flying along rivers or shorelines, especially at low altitude. Birds, as well as pilots, use these navigational features.
- Inland waters and shallow estuaries, even outside the breeding season, may contain large numbers of gulls, waders and waterfowl which make regular flights at dawn and dusk. To minimize the possibility of bird strikes and unnecessary disturbance of birds, DO NOT fly low over such areas.
- Avoid offshore islands, headlands, cliffs, inland waters and shallow estuaries by remaining well clear, so as not to disturb nesting colonies.
- While most bird species are active primarily during the day, bear in mind that many birds do fly at night, as well as during dawn and dusk.
- If there are two pilots, discuss emergency procedures before departure, including those if cockpit communications are lost, or if the windshield is penetrated.
- Up to 80-90 knots, birds have time to get out of the

way but the higher the speed, the greater the chance of a strike. Sunglasses or smoke goggles should be carried on board to wear in the event that the windshield is penetrated.

- There are three peaks during the year at which there is a greater risk of a bird strike. One is in March and April during the spring migration; one is in September and October during the fall migration; and the last is in July and August when many inexperienced young birds are present, and the flying abilities of adults may be impaired as they molt their flight feathers.
- Birds of prey have been reported to attack gliders and other aircraft.

While at the airport and in flight, be alert for the following:

Pre-flight

- In the springtime, pre-flight the aircraft thoroughly as birds can build a nest almost overnight. Any signs of grass, leaves or twigs should lead to further investigation of hard-to-inspect corners. A nest under the cowling can catch fire, or one in the tail area can restrict the flying controls.
- If birds are observed, particularly on the runway, report the activity to the ATC and request that airport personnel disperse them before you take off. Never use an aircraft to scare birds away.
- If the aircraft has windshield heating, remember that its use, in accordance with the Pilots Operating Handbook or Flight Manual, will make the windshield more pliable and better able to withstand bird impact.
- Use landing lights during takeoff, climb, descent, approach and landing. (Most bird strikes occur during

these phases of flight.) Although there is no conclusive evidence that birds see and avoid aircraft lights, they will make the aircraft more visible.

Take-off

- As you taxi out, listen for any warnings of bird activity on the ATIS or Unicom.
- When taxiing, watch for birds on the airport, and report all unusual bird activity to the Air Traffic Control (ATC) or Flight Service Station (FSS). Note: The most frequently struck birds are gulls, which may have a gray or black back that makes them difficult to see on concrete or tarmac runways.
- If a bird strike occurs during the take-off run, and there is sufficient runway remaining, stop. Vacate the runway and shut down. Inspect the intake, engine, etc., for damage or ingestion, or for bird remains that may be blocking cooling or other airflow ducts. Don't forget to check landing gear and brake hydraulic lines, downlocks, weight switches, etc.
- If the takeoff must be continued with an engine problem, properly identify the affected engine and execute emergency procedures.

In-flight

- If you are flying a quiet aircraft remember that birds on the ground face into wind and may not hear or see you coming.
- Note the rate at which a bird beats its wings. The slower the bird's wing-beat, the larger the bird and therefore the greater the expected damage. Large birds and flocking birds present the most threatening risk to aircraft.
- If you see bird(s) ahead of you, attempt to pass

above them as birds usually breakaway downward when threatened.

- If dense bird concentrations are expected, avoid high-speed descent and approach. Halving the speed results in a quarter of the impact energy.
- If the windshield is broken or cracked, slow the aircraft to reduce wind blast and follow approved procedures. Use sunglasses or smoke goggles to reduce the effect of wind, precipitation or debris. Remember to fly the aircraft—don't allow yourself to be distracted by the blood, feathers, smell and windblast. Note: Small general aviation aircraft and helicopter windshields are not required to withstand bird impacts and the propeller gives little protection.
- If structural or control system damage is suspected (or the windshield is holed) consider the need for controllability. Check before attempting a landing.

Approach and landing

- If flocks of birds are encountered during approach, go around for a second attempt because the approach may then be clear.
- After landing, if you have had a bird strike, be sure to check thoroughly for damage and report all bird strikes, no matter how insignificant. It is estimated that only 15-30 percent of all bird strikes are actually reported, so the actual degree of risk or the true cost of bird strike damages to the aviation industry is largely unknown.

By respecting these guidelines and staying on the lookout for birds you can take comfort in the fact that you have significantly reduced the possibility (and severity) of a bird strike. Welcome to spring, and fly safely!

Special thanks to Transport Canada's Aerodrome Safety

Branch. Much of this article comes from Transport Canada's "Bird Avoidance Brochure" and is reprinted here [Avemco's website] with permission.

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One Second in the Life of a Racer

Tom Fey

The Unlimiteds go flashing through the racecourse, engines howling, air shearing, heat waves streaming. Four hundred eighty miles an hour is 8 miles a minute, and the elite racers take about 70 seconds to cover the 9.1 mile Reno course. If you could take a souped P-51 racer flying the circuit at Reno, slow time down, and examine just one second, what would you find?

In that one second, the V-12 Rolls-Royce Merlin engine would have gone through 60 revolutions, with each of the 48 valves slamming open and closed 30 times. The twenty four spark plugs have fired 720 times. Each piston has traveled a total of 60 feet in linear distance at an average speed of 41 miles per hour, with the direction of movement reversing 180° after every 6 inches. Three hundred and sixty power pulses have been transmitted to the crankshaft, making 360 sonic booms as the exhaust gas is expelled from the cylinder with a velocity exceeding the speed of sound. The water pump impeller has spun 90 revolutions, sending 4 gallons of coolant surging through the engine and radiators. The oil pumps have forced 47 fluid ounces, roughly one-third gallon, of oil through the engine, oil cooler, and oil tank, scavenging heat and lubricating the flailing machinery. The supercharger rotor has completed 348 revolutions, it's rim spinning at Mach 1, forcing 4.2 pounds or 55 ft³ of ambient air into the combustion chambers under 3 atmos-

pheres of boost pressure. Around 9 fluid ounces of high octane aviation fuel, 7843 BTU's worth of energy, has been injected into the carburetor along with 5.3 fluid ounces of methanol/water anti-detonant injection fluid. Perhaps 1/8 fluid ounce of engine oil has been either combusted or blown overboard via the crankcase breather tube. Over 1.65 million foot pounds of work have been done, the equivalent of lifting a station wagon to the top of the Statue of Liberty.

In that one second, the hard-running Merlin has turned the propeller through 25 complete revolutions, with each of the blade tips having arced through a distance of 884 feet at a rotational velocity of 0.8 Mach. Fifteen fluid ounces of spray bar water has been atomized and spread across the face of the radiator to accelerate the transfer of waste heat from the cooling system to the atmosphere.

In that one second, the aircraft itself has traveled 704 feet, close to 1/8 mile, or roughly 1.5% of a single lap. The pilot's heart has taken 1.5 beats, pumping 5.4 fluid ounces of blood through his body at a peak pressure of 4.7 inches of mercury over ambient pressure. Our pilot happened to inspire during our measured second, inhaling approximately 30 cubic inches (0.5 liter) of oxygen from the on-board system, and 2.4 million, yes million, new red blood cells have been formed in the pilot's bone marrow.

In just one second, an amazing sequence of events have taken place beneath those polished cowlings and visored helmets. It's the world's fastest motorsport. Don't blink!

[Used with permission of the author (who is also an EAA'er!), via www.enginehistory.org]

Meeting Coordinator:

Randall Henderson

503-297-5045
Randall @edt.com



December 2005 Meeting

**Program: Holiday Party at Rob and Jenny
Hickman's on Dietz Airpark, Canby**

Address: 24172 S Skylane Drive

Date: Friday, December 16th

Time: 7:00 PM

Phone: 503-651-2230

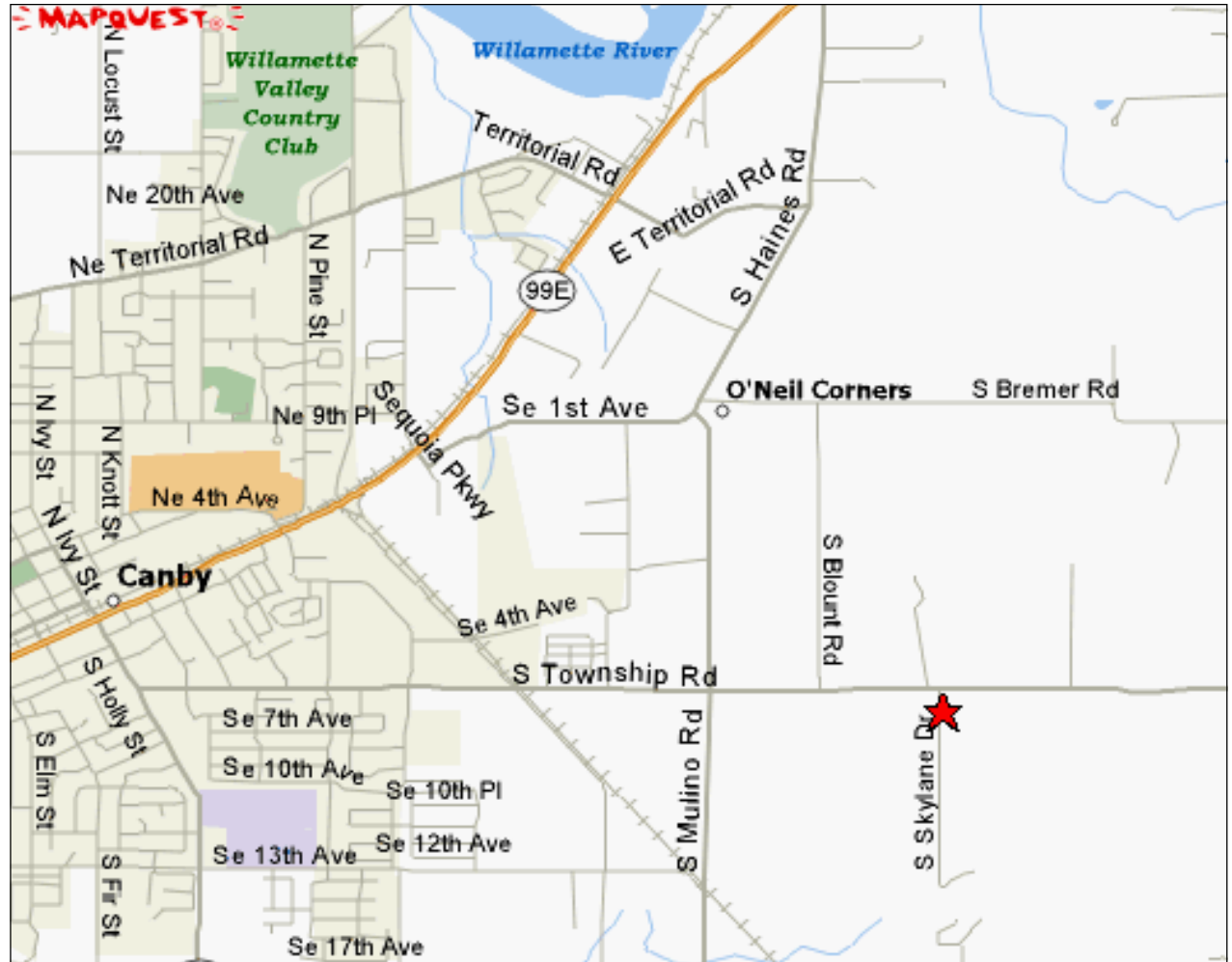
December Program:

December is our annual Christmas party, and Rob and Jenny Hickman have graciously offered to host it again, in their beautiful house on Dietz Airpark in Canby.

As in previous years, this is more of a social event than our usual, project-oriented meetings. We'll have an awards presentation by outgoing president Rion Bourgeois. If you just can't stand not seeing an airplane you can walk over to their huge, attached hangar and check out Rob's beautiful RV-4 and his RV-10 project. There'll be plenty to eat and drink all expertly prepared by Jenny Hickman and Dru Bourgeois.

Driving

Take I-5 to Aurora exit to 99E to Canby. When you get to Canby turn right on Ivy. Go three blocks to the first left turn which is Township. Go east on township, out of town past the graveyard to a 4 way stop. Go straight



through the 4 way stop, and 1.2 miles further on you'll see a low brick wall with mailboxes and the name Dietz Airpark. Turn right onto the road/taxiway which is Skylane drive. The address is 24172 S. Skylane Drive.

Flying

Not recommended for this gig. It'll be well after dark by the time we start and Dietz has reflectors but no lighting. There are trees at the south end and if you're not familiar with where they are... well, 'nuff said, eh?

Future Meetings

Jan 12th – Ed Hayden, RV-10, Portland

Feb 9th – Greg Halverson, RV-6, Portland

Mar 9th – Dave Lowry, Lancair Legacy

About the meetings:

Meetings are (usually) the second Thursday of the month, starting at 7:00 PM, unless otherwise noted, and are typically at the site of someone's experimental aircraft project or hangar.

November meeting: Lauran Paine and the Annual Pie Auction

Benton Holzwarth

I've lost my notes with a few of Lauran's best jokes and thoughts, but recall that it was a fine time hearing him speak. I'm glad he was able to join us, entertain us, this evening.

Then Hank Bullock took over as the auctioneer of our annual pie auction. The auction is always a great time, for those bidding and especially those not bidding but only trying to confuse the issue. Hank did his usual superb job of riding herd on the cats. Lauran also contributed a copy of his book of collected wisdom and wit, adding to the evening's proceeds.

By the end of the program, we auctioned off 17 pies and raised over \$350 for the club's projects.



Lauran Paine illustrates his stories with words and gestures.



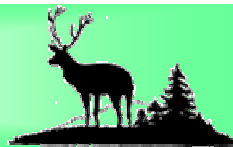
Above: Roy Glass demonstrates the proper technique for entering a bid.



Hank Bullock handled auctioneer duty. 40-45 folks attended the evening meeting.



DESTINATIONS



Columbia, California (O22)

Donovan Hammer

Columbia, California lies in the western foothills of the Sierra Nevada Mountains about forty miles northeast of Stockton. This is Mother Load country replete with a rich history of the gold rush days in the later half of the nineteenth century. Located a few miles north of Columbia is the historic town of Angels Camp in Calaveras County where a young Mark Twain lived circa 1864. During his stay at Angels Camp Mark Twain was to write his first successful story "The Celebrated Frog of Calaveras County". Of course, Columbia is also rich with gold rush history. In fact, the town is a living museum of sorts and is designated as a California state historic park which is dedicated to the preservation of what is probably the only town in the region that has changed little since the nineteenth century. During our visit we took one of the walking tours which are led by re-enactors dressed in period clothing who will attempt to immerse the tour group into the life and times of a gold rush town. Both my wife and I really enjoyed the walking tour and I recommend it highly. Later, while touring on our own, we went to the town's historic church where we wandered about the churchyard reading head stones. The stories told by these inscriptions can be a poignant reminder of just how tough it was for those that chose the hard life of a gold rush town in the search for prosperity.

The area surrounding Columbia can also offer up a wide variety of activities and attractions. Probably the most popular are the typical outdoor activities like boating,

fishing, hiking, and mountain biking. There are, as one would expect, several local outfitters and marinas that can provide equipment and guide services. The foot hills north of Columbia are host to four caverns of notoriety. Tours for Moaning Cavern, Black Chasm Cavern, and the California Caverns are managed by Sierra Nevada Recreational Corporation while the Mercer Caverns are managed by Mercer Caverns of Murphy, California. For the railroading buffs, I mention that the nearby Jamestown is home to Railtown 1897 Historic State Park. This is kind of a live-action museum where you can take a ride through the surrounding countryside behind a late nineteenth century steam locomotive. On our visit, we were able to get a walking tour through their fully operational machine shop and roundhouse. Over two hundred movie and TV productions have been filmed at Railtown including High Noon, Back to the Future III, and Petticoat Junction. Part of the roundhouse tour includes a look at all the surviving movie and TV props.

Columbia is a relatively easy flight from Portland during the months when the weather is favorable. Given that this trip is perhaps a fifteen-hour drive from Portland, Columbia is a natural candidate for a fly-out vacation. Expect the flight to take half a day or perhaps a bit more depending on the need for a fuel stop. For those who may not be familiar with the route, the summer months can be a time for afternoon mountain thunderstorms even on an otherwise fair-weather day. One should anticipate this potentiality by checking the convective forecasts as well as planning to be through the Siskiyou Mountains and south of Shasta Lake before early afternoon. The Columbia airport (O22) is a full service facil-

ity located about a quarter mile west of town. Car rentals are available through Hertz and Enterprise. A selection of food and lodging services can be found in and around Columbia as well as neighboring Sonora, Jamestown, and Angels Camp.

Travel Suggestion: If you have not already joined, I would recommend becoming a member of AAA. Their free regional guide books are just as relevant to the traveling pilot as they are to motorists. The AAA guide books provide lists and ratings for food and lodging services at or near your destination. Particularly handy are the summaries of hotel services including those of interest to pilots such as airport pick up and internet connection. The AAA guide books also provide descriptions and recommendations for the local area attractions. Not to be forgotten, many hotels and area attractions offer a 10% discount to AAA members.

Related web site links:

<http://www.airnav.com/airport/O22>
<http://www.columbiacalifornia.com/>
<http://www.railtown1897.org/>
<http://www.thegreatunfenced.com/>
<http://www.visitcalaveras.org/htdocs/index.htm>
<http://www.boydencavern.com/>
<http://www.mercercaverns.com/>

"When it comes to testing new aircraft or determining maximum performance, pilots like to talk about "pushing the envelope." They're talking about a two dimensional model: the bottom is zero altitude, the ground; the left is zero speed; the top is max altitude; and the right, maximum velocity, of course. So, the pilots are pushing that upper-right-hand corner of the envelope. What everybody tries not to dwell on is that that's where the postage gets canceled, too."

-- Admiral Rick Hunter, U.S. Navy

2005 Aviation Calendar

| | |
|-------|---|
| Dec 3 | Chapter 499 Fly-In & BBQ — Flyer pg 8. |
| It's | definitely getting to the end of the flying season! |

Chapter Calendar

| | |
|------------------|--|
| Dec 3 | Pancake Breakfast — Twin Oaks Airpark |
| Dec 16 FRIDAY | General Meeting — Holiday Party at the Hickman's, Dietz Airpark, Canby |
| Jan 7 | Pancake Breakfast — Twin Oaks Airpark |
| Jan 12 | General Meeting — Ed Hayden's RV-10 project, Portland |
| Jan 19 | Board Meeting — 7:00 PM, location TBD |
| Feb 4 | Pancake Breakfast — Twin Oaks Airpark |
| Feb 9 | General Meeting—Greg Halverson's RV-6 project, Portland |

Editor's Notes

Benton Holzwarth

Aaron Frechette wrote, "I thought that some of your might be interested to know that Corinne delivered a healthy baby girl last Wednesday (11/23). Her name is Evelyn Rae and she weighed in at 8 lbs 8 oz. Labor and delivery were without complication. Mother and child are doing very well and the whole family is happy for the new addition."

Congratulations Aaron.

Hope you've all been able to fly more than I, lately. I've scored a time or two around the field, but not much beyond that. Instead, I've launched into a couple tasks, getting my shop/garage more organized for building, and hope to get focused again on my project this winter. Along the way, I've also learned a little about fabric repair, keeping the Tri-Pacer airworthy — all skills I'll need to complete the project.



Board Meeting Highlights

Your Chapter 105 Board

The November Chapter 105 board meeting was held at Baja Fresh on Scholl's Ferry Rd on Thursday, Nov 17th, and was brought to order around 7:15 PM. In attendance this evening: Rion Bourgeois, Randy Lervold, Joe Miller, Jenn Hickman, Ralph Schildknecht, Tom Louris, Jim Mitchell, Dick VanGrunsven and Benton Holzwarth.

- Chapter 105 Board Positions: OFFICERS: Randy Lervold, President; Randall Henderson, Vice President; Benton Holzwarth, Secretary, Newsletter editor; Jenny Hickman, Treasurer, Poker Run coordinator. DIRECTORS: Rion Bourgeois, Facilities Management, Chapter Legal Counsel; Ralph Schildknecht, Facilities Management; Jim Mitchell, Facilities Management & Librarian; Mike McGee, Toolmeister, Quartermaster; Joe Miller, Breakfast Crew Chief; Len Kauffman, K.P. Coordinator; Ron Singh, Youth Activities Coordinator (incl. YE); Dick VanGrunsven, Bogardus Trust Liason; Tom Louris, Ad Hoc Projects. Stepping down for '06: Woody Hall; Jim Pace; Joe Blank; John Halle.

- The board decided to not designate a formal Flyout Coordinator, but instead remind everyone that *anyone* can organize a group flyout at any level of formality they choose. If it's a 'chapter' activity with flying, we should notify Nat'l, for liability coverage.

- Breakfast Issues: Signs for Storage Area: JoeM was reminded that he'd been volunteered to put together some signs for the storage closet at the breakfast hangar advising that the food and supplies are for the chapter breakfasts.

We're losing three breakfast crew chiefs: Louise Lane will be away for a year or more, on assignment with Intel; Jim Pace has business brewing with his land develop-

ment company that will tie him down for the foreseeable future, and Neil Arney is ready to pass the baton (spatula) to the next generation of pancake flipper. LenK asks whether we need to corral more 'breakfast volunteers' to cover the vacancies; the reply is that we think we can wait a month or two or three and see how it pans out. Let's hold with the current number for now, and see how it goes and whether anyone steps up to fill the shoes of the folks leaving.

- Project Hangar Update (Rion): The concrete is poured. The modifications to the hangar-space are moving forward: interior steel should be delivered shortly (last month's report mentioned that a bid had been received, and there was hope we could do better; a better price was found,) then the shear-wall modifications to the existing wall to allow the cut out for the pushed out space. Coming attractions: insulation, dry-wall and electrical, sprinkled with liberal county inspections.

- Golf Cart (Rion): a new 'project' has come to the chapter. Woody Hall's sister has donated an electric golf cart to the chapter. It's not working at the present time, and it's uncertain just what it needs -- perhaps nothing more than servicing the batteries. Otherwise it seems to be in good condition.

- Roster Booklets (Benton): I'm planning to produce a roster booklet like chapter 105 did in years past. Randy will send the records he has for each member with their e-mail newsletter announcement in December, so that folks can update their information. Then after the bulk of renewals are past, I'll get started.

- Upcoming meeting sites: Dec (Friday 16th), Hickman's home on Dietz airpark, Canby; Jan, Ed Hayden's RV-10 project; Feb, Greg Halvorsen's RV-6 project; Mar, Dave Lowry's Lancair Legacy w/ Fiberglass for Dummies; Apr, Van's Aircraft.

- Chapter Signs: Randy is working on a cohesive image for the combined EAA Chapter and Home Wing. When that comes together we'll continue pursuit of signs.

- Leather Jacket Raffle (Rion): Ticket sales at the Nov meeting (pie auction) were good, and there'll be two more buying opportunities before the drawing at the holiday party -- the December breakfast and the holiday party itself.

Open Floor --

- Planning Session (Randy): Randy reminded us he's planning an 'All Day' planning session for the board early next year, tentatively scheduled for the second Saturday in Feb. The goal is to level on, explore and formalize several areas -- Finances, Major Objectives, Activities, Benevolence and New Programs. If members have particular issues or thoughts, they're encouraged to bend the ears of their friendly chapter leaders.

The board plans to not get together for a December meeting, and instead resume with a meeting scheduled at 7:00 PM on the third Thursday in January at the Baja Fresh on Scholl's Ferry Rd.

2004-05 Feature Article Index

This section chronicles our contributors for the previous 12 months (thank you authors and photographers!) and in the January issue provide a complete index to the previous year's articles. —Ed.

December '04

- Randy Lervold / Are You Off Balance?
- Amit Dagan / Phase 2, First Flight or The Next Question After the Whenzitgonnabedone
- Brian Moentenich / A Review of RV Accidents in the Last Year

- Benton Holzwarth / Nov Meeting: Twin Oaks Airpark -- Mike Robertson on LSA & LSP Rules and our Annual Pie Auction

January '05

- Amit Dagan / Thermodynamics and Applied Material Sciences in Plexi-land or What Size to Drill the Holes in the Canopy

- Dick VanGrunsven / Little GEE BEE Restoration Project

- Don Hammer / Demystifying the Taildragger (Part One of Two)

February '05

- Amit Dagan / Can You Hear Me Now?

- Benton Holzwarth / January Meeting at the VanGrunsven Sunset Shop: History Lessons and Restoration of the Bogardus Little GEE BEE

- Don Hammer / Making Sense of the Enigmatic Wheel Landing (Part Two of Two)

March '05

- Randy Lervold / Builder Motivation Day

- Benton Holzwarth / February Meeting at Dan & Sun Benua's Shop; RV-10 in Progress & Metal Working Tips

- Randall Henderson / Conferences and the Puyallup Air Fair

April '05

- Mike Linse / Threaded Static Port Fitting

- Randall Henderson / Stuck on Orcas Island

- Benton Holzwarth & Jim Hoak / An Evening at Van's Aircraft Factory

- Mike McGee / How Smooth It Is! (Prop Balancing)

May '05

- Mike Shaw / Some Things to Watch For When Flying in Canada

- Benton Holzwarth / Less is More—Randy Lervold and his RV-3B

June '05

- Randy DeBauw / First Flight of N610RV

- Benton Holzwarth / Doug Stenger's Shop; Banks, OR

- Don (Duck) Wentz / Allen Duberstein Memorial

- Gary Dunfee / Young Eagles at HIO

- Benton Holzwarth / Planes, Trains and Automobiles

July '05

- Benton Holzwarth / Roseburg Warbird Airshow & Bogardus Trophy Presentation

- Joe Blank / 14th Annual Northwest RV Fly-In

- Randy Lervold / Prop Balancing at the Chapter Project Hangar

August '05

- Benton Holzwarth, Jim Hoak & Randall Henderson / Luau at the NW EAA Fly-In — Arlington

- Jenny Hickman / Poker Run 2005

September '05

- Benton Holzwarth / Chapter 105's 4th Annual Poker Run

- Joe Blank / Tips 'n Techniques: Maintaining Your Oil Temperature

- Benton Holzwarth & Jim Hoak / Open House at Lenhardt Airpark

October '05

- Randall Henderson / TnT: Breathing Oxygen Mount

- Gary Dunfee / TnT: Comm Antenna Reception

- Benton Holzwarth / Precision Airmotive w/ Alan Jesmer

November '04

- Pete Forsyth / TnT: MIL-G-81322 Grease

- Benton Holzwarth, Len Kauffman / TnT: Safetying Your SCAT Tubing

- Randy Lervold / Chapter 105: version 2006

- Dean Sigler / Little Gee Bee photos

- Randy Lervold / Prop Balancer Program Update

- Benton Holzwarth / Len Kauffman's RV-8 Project & Panel Electrical Tutorial

- Don Hammer / Three Summer Fly-out Destinations

Buy / Sell / Trade

Ads are free but are subject to editing. Aviation related ads are given priority. We reserve the right to refuse any ad. Submit to the Editor, Benton Holzwarth (benton@siletzbay.com) or call 503-684-2008. Please let us know when your item sells. Ads will run for four issues, and may be renewed or adjusted by contacting the editor. Last issue indicated by [mm/yy].

Classifieds

Paint For Sale — Ranthane polyurethane, AN Orange Yellow, enough for an RV, plus Tennessee Red for trim. Includes catalyst, reducer, epoxy primer, alodine and metal cleaner. Purchased in August, but decided to have it professionally painted, and he used a different paint. 50% off list for the lot. Call or email for details. Dann Parks 360-687-7441 or dparks@spiritone.com

RV-6A (ATTENTION TALL PILOTS!) -- \$58,000 AVAILABLE FOR SALE 900 hrs SN, new top end, O-320 160 hp, night VFR, send for specs & pics, no med forces sale - located Portland - Contact Kevin Lane 503-233-1818 or N3773@comcast.net [03/06]

RV-6 Fuselage Jig + Free to a Good Home — Used by Mike Seager and Greg Halverson, it's now ready for its next fuse. Located in NE Ptld. Contact Greg at 503-528-2841 or cando16@aol.com 03/06]

Bob Boring's 2002 RV-6A N613LE For Sale -- Airframe & Engine - TT SNEW 132; Completed March 2002; Lycoming O-360 180 Hp; Sensenich Fixed Pitch Metal Prop; Garmin 295 Color GPS; Apollo SL 40 Com; Apollo SL 70 Mode C Transponder. Asking \$75,000.



Located in Hangar PLS B-6 at Troutdale, OR (KTTD) Contact Brian

Moentenich 503-808-4266 (work) 503-666-7518 (home) [02/06]

Av Magazines for Sale — I have collected over 77 years worth of aviation magazines. The Sport Aviations are nearly complete '74 to '05, the Experimenters are nearly complete 89 to 05 (1 year missing), the KitPlanes are nearly complete '85 to '02. The other magazines are mostly '60s & 70s -- 68 issues of Air Progress, 60 issues of Sport Flying, 54 issues of Air Classics, 10 issues of Popular Rotorcraft and a few other odd aviation magazines. First 3 categories are in excellent condition, rest are in very good condition. There are well over 850 issues in this collection. I would like \$400 for the collection. Will consider offers and trades. Regards, Marv Foster in Salem, cammy302@aol.com [01/06]

Open for Business

Top Flight Interiors — Fine Aircraft upholstery, impeccable quality, custom interiors, leather specialist, imported textiles. Jesse Cary at Twin Oaks or 503-475-1036.

Web Sites, Applications & Desktop Publishing — Oregon Media, Phil Spingola phillip@OregonMedia.com or 503-201-4896

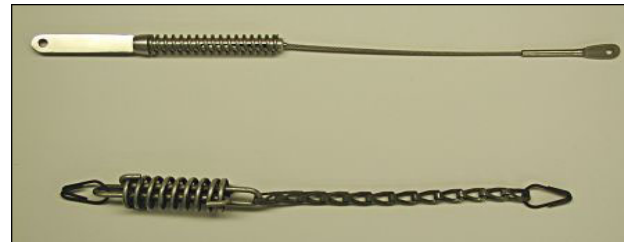
Duckworks Landing Lights — Standard kits start at \$75. Round Halogen and Xenon HID lights are available for new installations and upgrades of our kits and others. For details/pricing see www.duckworksaviation.com or call 503-543-2298

Bill Esther Engraving — Contact Bill for help with your custom engraving project. See sample work at http://www.rvproject.com/esther_engraving.html ecaps.1@juno.com or 503-851-6375

Long-life Brake Pads — For Experimental Aircraft only (Not FAA/PMA/TSO or STC'd at this time.) Made from Organic Mat'l, in use 4 years on multiple acft -- last ~ 5X standard linings, w/o wearing disks. Available in Cleveland -105 (2 rivet) and -106 (3 rivet) types. \$60 plus ship-



Brentz Enterprises — Tail Lynx — Tail steering springs made from aircraft-grade materials. Small, strong, streamlined and all Stainless steel. Now available through Van's Aircraft — www.vansaircraft.com or 503-678-6545



Back in Sept we had some great flying weather. I'd talked with Jerome Larson, who flies this RANS S-7 out of Harrisburg, OR. He described it as great flying, on the cheap.

“Contact!” Chapter Officers and Staff

| | | |
|---|--|---|
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**Portland/Twin Oaks EAA Chapter 105
 Membership Registration / Renewal Form**



Dues: \$20/yr e-delivery of newsletter, \$25/yr for mailed paper newsletter
 Make checks to "EAA Chapter 105" please

Send to: Jennifer Hickman
 24172 S. Skylane Dr.
 Canby, OR 97013

Name: _____ National EAA #: _____
 Address: _____ Own / Fly: _____
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 City/St/Zip: _____
 Home Ph: _____ Completed: Yes / No / 90% done 'n 90% to go: _____
 Work Ph: _____ Comments: _____
 Cell Ph: _____
 E-Mail: _____
 Spouse's Name: _____

For Renewals, indicate **changed** information only
 Check: New _____ Renewal _____
 E-delivery (\$20) _____ Paper delivery (\$25) _____
 Renewing multiple years: _____ yrs, _____ \$ total



Next General Meeting

VAF-Home Wing / Chapter 105

- Rob & Jenny Hickman's House
- Dietz Airpark, Canby (Map—pg 7)
- **Friday**, December 16th— 7:00 PM

Next Chapter 105

Board of Directors Meeting

(Everyone is welcome to attend!)

- Will be in January! (No Dec meeting)

EAA Chapter 105 / Volume 45 Number 12 / December 2005

HOME WING **EAA Chapter 105**
Portland, OR — Twin Oaks Airpark 7S3

The Leader In Recreational Aviation
EAATM



To:

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