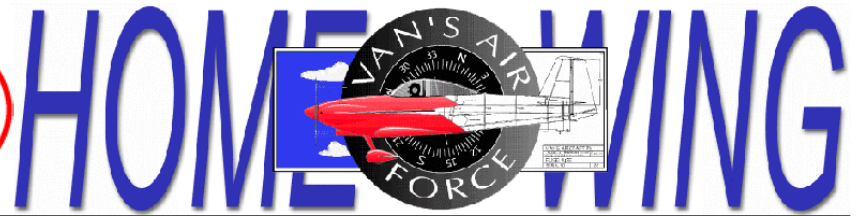


# Experimental Aircraft Association

## Chapter 105 Portland, OR

Twin Oaks Airpark—7S3 [www.EAA105.org](http://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



• **Feb 10** — Chapter Meeting:  
Dan & Sun Benua's RV-10 project. Details on page 4.

• **Feb 17** — Board Meeting: 7:00 PM at Benton Holzwarth's house, Tigard. 503-684-2008

Map: [www.tinyurl.com/57rjb](http://www.tinyurl.com/57rjb)

### Newsletter Deadline — Feb 19

• Newsletter article contributions and ads are welcome anytime, but may be held to a later issue if received after Feb 19.

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### 122.75

J. Rion Bourgeois, Chapter President

### Little Gee Bee

The January meeting was an introduction to the restoration of this historical aircraft, and there have been several work sessions at Dick Van Grunsven's hangar/shop since. If you haven't gotten involved yet, you are missing an opportunity to have a hand in the restoration of a piece of aviation history that will be displayed in the Smithsonian Air & Space museum.



### Formation Flight anyone?

Joe Blank has accepted appointment to the board of directors as fly-out coordinator, and is following leads on a formation flight clinic at the Mojave Airport (home of Burt Rutan's skunkworks) at the end of April. If you are interested, contact Joe and get on the list of potential attendees.



### Breakfast news

We celebrated the New Year with grits and blueberry pancakes this year. Despite the holiday, we still served about 100 diners. Len Kauffman has taken seriously his role of KP volunteer coordinator, and as a result we are consistently having full crews, which makes it much more fun for everyone. Mike McGee has settled in as Quartermaster, buying the groceries whenever he is not off on some great adventure, like horseback riding in the South of France or some other exotic locale. So if it weren't for Char Miller, I wouldn't have much to do anymore.

### B-17

We will be hosting the B-17 "Fuddy Duddy" Memorial Day Weekend this year. Put it on your calendar if you want to help. She gives rides in the morning,

### Breakfast KP Duty

**Saturday, February 5th, 2005**

7:00 AM	9:00 AM
Steve Harris	Ron Graff
Allen Hawkins	Dick Guarnero
George Henderson	Scott Gustafson
Jim Hoak	Carl Hay
Ralph Hudson	Cas Hoefman
David James	Dennis Jackson
Paul Johnson	Charles Kaluza
Bill Kenny	Stephen Kautz

**Saturday, March 5th, 2005**

7:00 AM	9:00 AM
Harmon Lange	George Manley
Randy Lervold	Ted Marks
Glenn Longley	Robert Martilla
Terry Lorz	Ed Mason
Tom Louris	John Mates
Steven Mahoney	Virgil Mays
Philip Mandel	Gary McCormick
Patrick McGowan	Gary McGaughey

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

and ground tours in the afternoon.

### **Humor for the aged**

Believe it or not, Don Wentz just turned fifty, do here are a few one-liners in his honor. A man is getting old when the gleam in his eye is merely the sun reflected in his glasses. It is woman's fate to keep on growing older long after she is old enough. Growing old has its compensations: all the things you couldn't have when you were young you no longer want. But remember, growing old isn't so bad, especially if you consider the alternative. And growing old has one advantage: you'll never have to do it over again. ["Is this OLD airplane safe to fly in?" "How do you think it got so old?" -Ed.]

## **West Coast Formation Clinic**

[ John Halle is the local contact, drumming up interest in this formation flying clinic. Joe Blank is testing interest in making a fly-out activity. -Ed ]



The dates of the formation clinic are set. April 29 – May 1 at Mojave Airport in California, home of the Holy Grail of experimentals! ([www.mojaveairport.com/](http://www.mojaveairport.com/))

Good facilities, cheap gas, open airspace, and airfield management that is happy to have us. We'll be working on hotel rates, etc., next. To help with logistics, the sooner we can get a head count on who is planning to attend, both students and instructors, the better. Please email me [Barry Hancock] directly at [sportform@cox.net](mailto:sportform@cox.net) if you are planning to attend.

Cost to attend the event will be minimal. In preparation for the event, all participants should be familiar with the FFI manual [www.b2osh.org/FFI\\_manual.htm](http://www.b2osh.org/FFI_manual.htm)

To see how this compares with FAST standards, visit: [www.northamericantrainer.org/OperatingPolicies.htm](http://www.northamericantrainer.org/OperatingPolicies.htm)

The T-34 Formation Manual is required reading and is available at amazon.com.

I cannot STRESS enough the importance of being familiar with the contents of the manuals! Please come prepared - if you don't, you degrade the experience for everyone.

Are you interested, but still unsure? Feel free to call me, and also visit this site for a good write up on the FFI experience: [www.avweb.com/news/airman/184315-1.html](http://www.avweb.com/news/airman/184315-1.html)

Don Barnes will be setting up a page on his web site with all the info here shortly, thanks Don! [See [www.lancairlegacy.com/Formation](http://www.lancairlegacy.com/Formation)]

Also, the question has come up if other types are invited. The answer is yes, as long as the following conditions are met: aircraft configuration and performance are similar - and they can deal with constantly being flogged for flying inferior equipment! :-)

Cheers, Barry

Barry Hancock  
Western Regional Coordinator  
RedStar Pilots Association  
(949) 300-5510

[www.flyredstar.org](http://www.flyredstar.org)

"Communism - Lousy Politics, Great Airplanes"

## **YOUNG EAGLES VOLUNTEERS ALLOWED CERTAIN TAX DEDUCTIONS**



Because EAA is a 501(c)(3) organization under the IRS Code, individuals participating in YE events may be able to deduct out-of-pocket expenses directly connected with YE flights. Some examples of applicable expenses are:

- Fuel and oil directly consumed by the aircraft in the demonstration flight, not to exceed 200 miles
- Fuel and oil to another airport within 50 miles to meet a young person
- Transportation, not to exceed 30 miles one way, to get to and from the airport
- The rental charges for a bus or van to bring a group of young people to the airport
- The rental cost of a plane used only for the program
- Postage for mailing the registration records to EAA's Oshkosh Young Eagles office
- Extra liability insurance purchased solely for flights for the program
- Landing tie down fees at a non-home based airport
- Aeronautical education materials
- Meals for the young person (but not the volunteer)
- Film and developing costs for Young Eagle photos

Indirect expenses, such as hangar fees and annuals, are not considered "out-of-pocket" and are therefore ineligible. Use this worksheet to help you calculate your expenses.

More information is available at [www.eaa.org/young eagles/tax\\_deductions.html](http://www.eaa.org/young eagles/tax_deductions.html)

As always, consult your tax professional for specific guidance.

# Can You Hear Me Now?

Amit Dagan



One question which seems to come up time after time, concerns the placement of the VHF comm antenna on the air-frame. Many factors need to be addressed when deciding on the final spot for this important part of the radio system:

1. Is the proposed mounting spot strong enough (structurally) to support the antenna, in the 200+ mph wind it will endure?
2. Will a long run of coaxial cable to a wingtip (and the weight penalty) be worth it for the savings in drag -- the promise of an in-the-wingtip installation?
3. Is the placement going to hurt the transmit/receive performance of the radio, because of electronic "shadowing" by other structures (e.g. -- gear legs)?
4. Is the proposed mounting spot conducive for easy maintenance?

And another issue to think about:

5. Will it be possible to easily hook up a handheld transceiver to this antenna in the event of a comm radio failure?

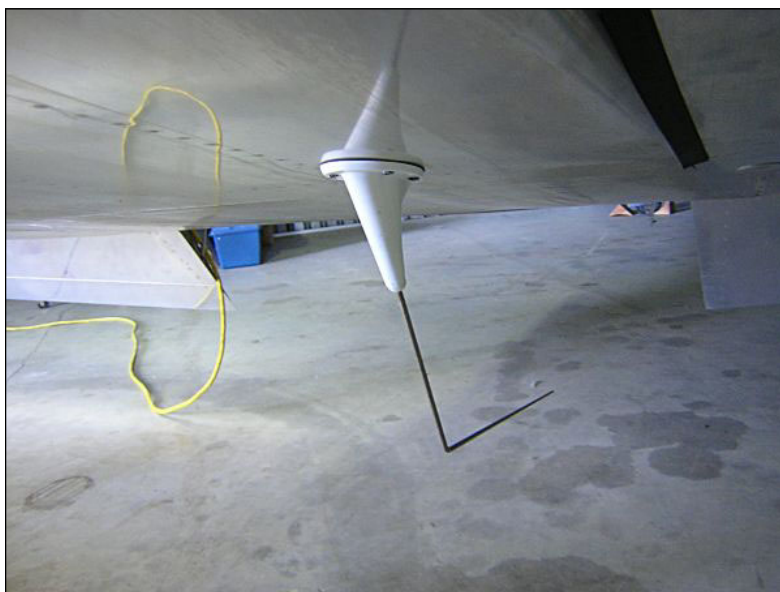
I believe I have read

somewhere that for the RVs, the best place for a comm antenna, as far as the transmission and reception is concerned, is the top of the vertical stabilizer. Indeed, if you have enough room under the fiberglass fairing on top of the vert. stab., you might benefit from placing your antenna right there. Your weight penalty of running a coax all the way from your instrument panel to the tail is another matter to consider.

I suspect that the small penalty in drag of having the antenna mounted on the belly is worth the saving of the coax run. The skin right in front of the spar carry-through is thick and reinforced by the spar angles and floor stiffeners. Further more, by placing the antenna in the position shown in the picture, It is easy to reach down between your legs, disconnect the BNC connector, and quickly attach a handheld transceiver

with a 3'-4' length of coax.

So, can you hear me now?





**Meeting Coordinator:**

**Randall Henderson**

**503-297-5045  
Randall @edt.com**



*February 2005 Meeting*

**Program: Dan & Sun Benua's RV-10 project**

**Address: 18600 NW Skyline Blvd., Portland**

**Date: Thursday Feb 10, 2005**

**Time: 7:00 PM**

The February meeting will be at Dan and Sun Benua's house/shop, where they're building their second RV, an RV-10. The "emp-cone" and wings are done, and the fuselage is well underway. Dan will be talking about the RV-10 project and conducting a mini-workshop on some of the metalworking techniques that are common to both the new- and older-style kits.

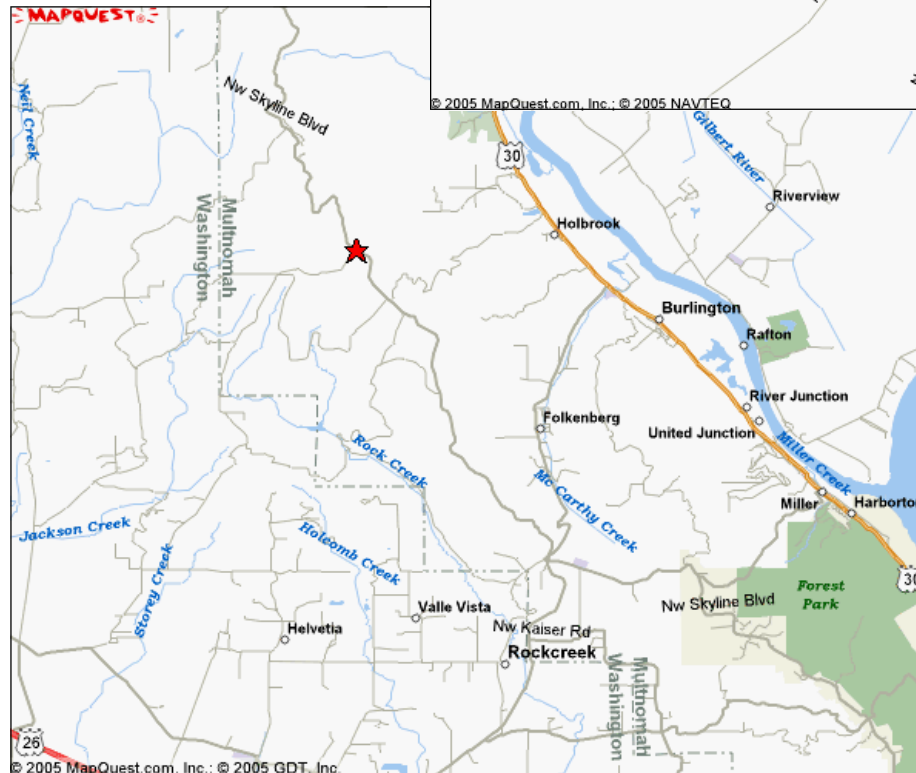
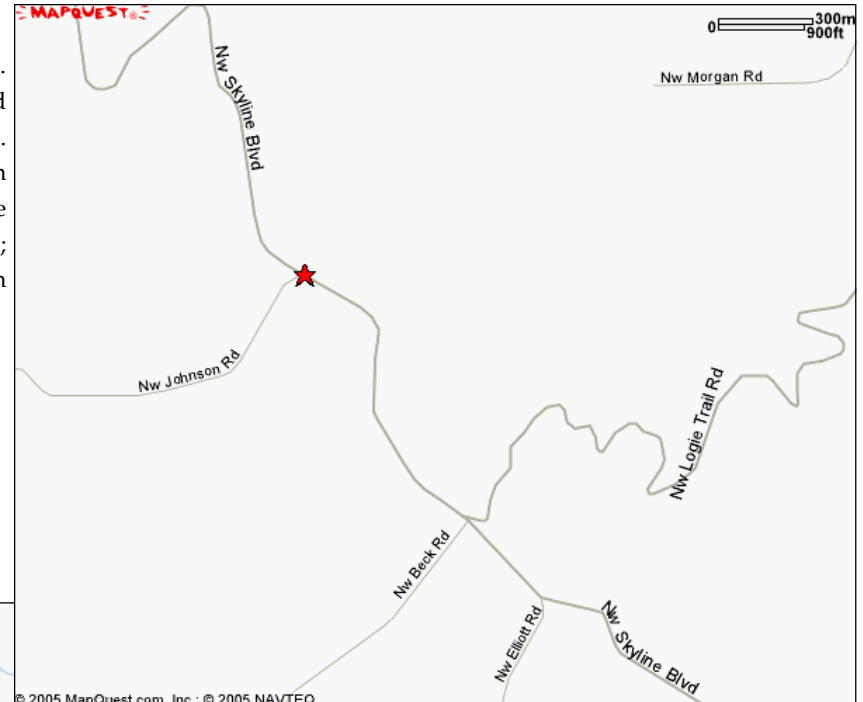
**NOTE: If there's snow or ice, the meeting will be cancelled or moved. Be sure to check the web site for updates if it looks like that's a possibility.**

#### **From Beaverton**

Take Hwy 26 west to Cornelius Pass Road. Take a left off the exit ramp and follow the road 4 miles north to the top of the pass. At the flashing yellow, turn left onto Skyline Blvd, then right at the stop sign. Follow Skyline for about 5 miles. As you pass Johnson Rd., start slowing down for the right turn into the Benua's driveway.

#### **From NW Portland**

Take Hwy 30 west toward Scappoose. One mile past the Cornelius Pass Rd intersection, turn left onto Logie Trail. At the top of the ridge, turn right on Skyline. After about a mile you'll see Johnson road come in from the left; start slowing down for the right turn into the Benua's driveway.



## Future Meetings—Tentative!

Mar – Van's Aircraft Factory, Aurora

Apr – Randy Lervold's RV-3, Vancouver

### About the meetings

Meetings are 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.

**IMPORTANT:** The Van's Air Force Home Wing and EAA Chapter 105 newsletter is in no way a publication of Van's Aircraft or any other corporation. All products reviewed or mentioned are not necessarily recommended for use by the Home Wing or EAA Chapter 105, but are included for informational purposes only. All building or flying tips represent only the means by which the builder whose name is associated with the tip chose to build or fly his/her aircraft. Builder's tips are not meant to replace the plans and instructions from Van's Aircraft or any other company. All information is presented only as a source of information, and this newsletter is a forum for exchange and the sharing of ideas and construction methods only. NO responsibility or liability is assumed, expressed, or implied as to the suitability, accuracy, safety or approval thereof. Any party using the suggestions, ideas, or examples does so at their own risk and discretion and without recourse against anyone. The editors of the Home Wing and EAA Chapter 105 newsletters and the builder's tips submitters are not responsible for any product, incorrect construction, design failure, unsafe aircraft operation practice, nor any other peril. Any material printed within may not be reprinted without specific permission, and then should include credit to the original source and author. The Home Wing and EAA Chapter 105 newsletter is published monthly. A complimentary issue for new builders is available upon request. Mail or e-mail all subscriptions, ideas, tips, tricks, and articles to the newsletter editor.



A few pictures from the Little GEE BEE work party at DickV's Sunset Shop, Saturday, Jan 29th. Around ten people turned out to work on repairing wing ribs, and sanding woodwork in preparation for varnishing.



# January Meeting at the VanGrunsven Sunset Shop

## History Lessons and Restoration of the Bogardus Little GEE BEE

### Mike Story, Dean Ziegler and Dick VanGrunsven

The January 13th meeting was held at Dick VanGrunsven's Sunset shop, in North Plains, OR.

Most people assume George Bogardus built the airplane that he made so famous with his flights to Washington, DC. It was actually originally constructed by Tom Story who was later and perhaps better known for the Story Special that led to the Bowers Fly-Baby. His son, Mike Story, was on hand to tell us a little of his father.

Mike related that artisans and craftsmen run in his family. His memories growing up are filled with watching and assisting with his father's projects: planes, midget racers and sports cars. The plane known now as the Little GEE BEE was constructed in St. Johns, literally with an O/A torch and a hacksaw.

Mike brought along albums of family pictures and magazine articles featuring his father's projects that were a lot of fun to leaf through. Through the talk it was clear that Mike really loved his father and was proud of him, and that much of the elder Story rubbed off on the children.

Dean Ziegler also attended the meeting and spoke for a few minutes on his 'project.' He's been organizing the heaps and piles, stacks and boxes of photos, letters and memorabilia left behind by George. George was at least a

saver, if not an organizer.

Many of us are at least aware of the history of the "Beaverton Outlaws" (sometimes the "Oregon Outlaws") and their activities at Bernard's Airport in Beaverton, OR. Dean related a little more of the story the leading up to that time.

Earlier, the land adjacent to Beaverton High School was

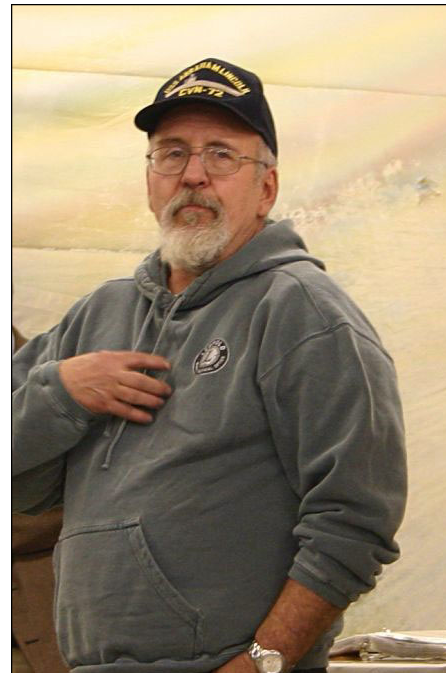
devoted to a movie studio. Premium Pictures built a large building and cranked out several (a dozen or 15?) movies before closing up shop. With the movie studio project failed, the owners considered what else they might be able to do with the large building they'd put up, and decided to try their hand at commercial airplane construction.

That business ultimately failed as well, but the area was seeded with airplane folks that moved their base over to the fledgling Bernard's airport.

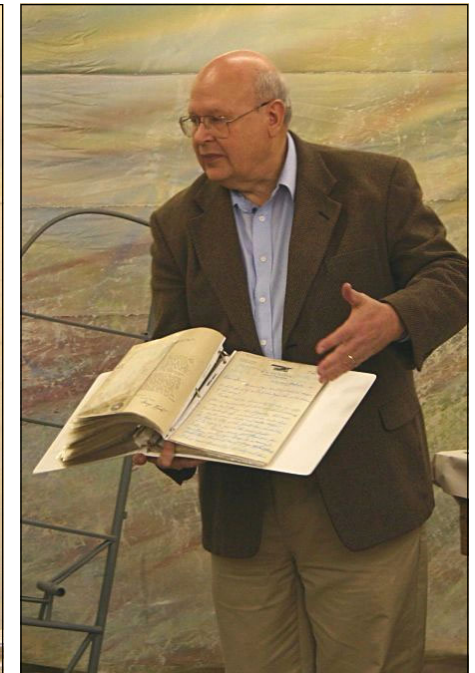
Dean has organized much of the bulk of the Bogardus materials, "enough for several books", and continues with the remainder. He displayed letters that George had exchanged with folks like Paul Poberezny and Pete Bowers among others, as together they worked to im-



*Dick VanGrunsven speaks on the tasks involved in the restoration project before us.*



*Mike Story relates growing up in a 'homebuilders' home — there was always a project.*



*Dean Ziegler displays some of the Bogardus materials he's been organizing.*



prove their flying machines.

With the guest presentations covered, Dick moved to the business of the meeting: describing the work so far completed on the restoration of the Little GEE BEE and the tasks remaining to return it to a 'museum grade' (not 'flying') display of what it was — a very plain, cheaply built, 'homebuilt' light airplane. Aaron Frechette was singled out as a new hand, who along with Laird Smith and Dick's brothers, Jerry and Stan, has been there regularly working on the project. Aaron confided that working on it has been almost infectious fun. It's just great to



*An individual wing rib — one of many — essentially intact, but in need of clean-up and regluing.*

be connected to project where everyone is pitching in just to be involved, to join in the camaraderie.

Dick also announced that he's negotiated with the Smithsonian-NASM folks who have agreed to accept it, once restored, into their collection for display with a section of homebuilt planes to be housed at the new Udvar-Hazy Annex near Dulles airport, near Washington, DC.

Dick has established an expectation that the work can be completed by the end of the year (2005 -- yeah, \*that\* year) even given the expected work slowdown as the good flying weather approaches.

Rather than oversee the individual work areas himself, he's soliciting people who'll be willing to work regularly and are familiar with the task (say, wood restoration or fabric work) to sign on as 'captains' who can then oversee small teams focused on the work-stage. Most of the work is happening on Saturdays now, but captains will have the option of setting up alternate hours if a different day works better for them.

About a dozen new folks have signed on to help in some



*Aaron Frechette, surveying the wing components.*

capacity. Dick and especially the captains looking to organize how they'll make headway on an area would love to hear from you. Contact Dick at 'engineering2@vansaircraft.com' if you'd like to add your name to the mail list for restoration helpers. If you can fill a 'captain' spot, volunteering your wood, tube 'n fabric skills, there is a SPECIAL need to hear from you.



*Above: Ken Scott leafs through the materials Dean Ziegler's organized. Below: A nice display of some of the related articles and bits.*



## Making Sense of the Enigmatic Wheel Landing (Part two of two)

Donovan Hammer

Starting a discussion about wheel landing technique among a group of taildragger pilots is akin to striking a match within close proximity of an open gas can. The differing opinions for why, when, and perhaps even how we perform a wheel landing is yet another example of those fiercely fought battles between opposing schools-of-thought that are sometimes based on little more than tradition or conventional wisdom. Nonetheless, my goal here now, in spite of the potential pyrotechnics, is to tackle some of the finer points of wheel landings.

There is little debate that wheel landings are a part of any proper taildragger training curriculum. In fact, the FAA mandates it. It also seems that there is pretty good agreement on the way they should be performed. However, as a taildragger student years ago, I found it frustrating that there was remarkably little consensus among



A Bob Barrows-design tail wheel — homebuilt!

the experienced taildragger pilots and flight instructors as to when it was appropriate to use a wheel landing instead of a three point. The differing opinions for the use of wheel landings can be traced to the underlying assumptions made and the relative importance given to them. Therefore, it is important to know what these assumptions are, what principles they are based on, and what priority is assigned to them. To begin a discussion on wheel landings it might first help to briefly recap some taildragger basics from my previous article.

### Taildragger Basics

An explanation for the main difference between taildraggers and tricycle airplanes centers on the positioning of the main landing gear. A tailwheel airplane can be perceived as pushing its main gear out ahead of the Center of Gravity (C.G.). Conversely, the tricycle airplane drags its main gear behind the C.G. If landed misaligned with the direction of travel, the taildragger wants to diverge from the direction of travel. If not corrected early the divergence may deteriorate into a ground loop. On the other hand, if the tricycle airplane is landed misaligned it will automatically steer back into alignment and maintain the proper direction of travel. At touchdown the taildragger is subject to the "bounce" because the landing gear, which is mounted ahead of the C.G., can push the nose up and increase the wing's angle of attack. The increase in the angle of attack creates more lift and may actually send the taildragger back up into the air. The "bounce" is a misnomer in that the reaction is more aerodynamic than mechanical. Again, the tricycle has the more favorable characteristic because at touchdown the landing gear, which is mounted behind the C.G., pushes up on the tail and decreases the wing's angle of attack. The decrease in angle of attack decreases lift below what is needed for flight and helps hold the airplane onto the runway.

We had established that the two areas of concern for taildraggers are the loss of directional control and the "bounce". But, there are some things that counter the instabilities of the taildragger's landing gear configuration. The horizontal and vertical tail surfaces offer stabilizing interactions as long as sufficient airspeed exists. Furthermore, assuming it does not freely swivel, the tailwheel can also provide a significant means to maintain directional control as long as it is firmly in contact with the runway.

By design the tricycle airplane has very favorable characteristics and is very tolerant of wider variations in touchdown airspeeds as well as a certain amount of directional misalignment. However, the tailwheel pilot must pay strict attention to control of airspeed, attitude, flare, and alignment. For the three point landing, the airplane is intolerant to all but the smallest variations in the airplane's attitude and airspeed, but is relatively tolerant of wider variations in the airplane's vertical descent speed making it less susceptible to "bounce". The wheel landing is pretty much the opposite in that it allows for wider variations in attitude and airspeed, but is intolerant of excessive vertical descent speed which makes it more susceptible to "bounce".



A Stinson 108-2. (All photos from Oshkosh '04.)



## Putting Theory into Practice

To fully appreciate what a wheel landing might have to offer it would be good to once again contrast it with the three point landing. Any landing can be broken down to five phases: the approach, the flare, the hold-off, the touchdown, and the roll-out. The approach is the stabilized descent along the glide slope while holding the runway centerline. The flare is where the airplane is smoothly pitched up to fully arrest the descent speed established during the approach. Although some instructors consider it part of the flare, it is better for the taildragger pilot to consider the hold-off separately as the brief period of time just prior to touchdown where the airplane rides along at a fairly constant altitude of perhaps a foot or so above the runway. The hold-off is where all of the final critical adjustments must be completed before letting the airplane settle onto the runway. These adjustments would be such things as eliminating any remaining drift or misalignment. For the three point landing it also means bleeding off any excess airspeed by continuing the nose-up rotation until the proper tail-low attitude is achieved whereupon the airplane left to settle onto the runway for the touchdown. The three point landing is more or less complete at the touchdown and the roll-out is primarily used as a transition into a slow taxi. Since the three point landing is done at the slowest possible airspeed the roll-out will be shorter which can be useful for short runways.

The approach to the wheel landing is pretty much the same as the three point except some pilots, for reasons to be explained shortly, may maintain just a few extra knots of airspeed. The flare differs from the three point in that at the end of the flare the airplane must have enough extra airspeed to be able to maintain essentially a level attitude while entering the hold-off where it must momentarily maintain a constant height just above the runway. The extra airspeed can be provided by one or more

of the following actions: a slightly delayed flare, extra speed in the approach, or carrying a little engine power throughout the landing. Airspeed will start to bleed off during the hold-off and the airplane must be allowed to settle onto the runway before too much airspeed is lost. The rate of descent as the airplane settles is determined by smoothly raising the nose ever so slightly in order to slow vertical descent speed enough to avoid a "bounce". At touchdown, the pilot applies a little forward pressure on the stick to get the airplane into a more level attitude to snuff any "bounce" tendency as well as to simply eliminate any remaining lift so as to suppress any wind action. To keep the tail flying the airplane must enter the roll-out phase at a higher speed than that for a three point.

There is an old adage that talks of the wheel landing requiring the pilot to land the airplane twice. That is, the wings and main gear lands first followed by the tail and tailwheel later. It might be said that the wheel landing takes on its various useful forms depending on the strategies used for landing the tail. Although, to many low-time taildragger pilots it might seem that such strategies are limited to simply executing a wheel landing that avoids being a source of amusement for the local



*A brace of AT-6s — the Aeroshell Aerobatic Team.*

## Do You Want to Win a KitFox?



EAA Chapter 517, Inc. in Missoula, Montana is conducting a sweepstakes



with a KitFox Model V which was completed in 1997 as the Grand Prize. Built

by a retired airline captain, this beautifully completed aircraft is powered by a Teledyne Continental IO-240 engine and was appraised at \$48,500. This beautiful airplane, painted in a patriotic red, white, and blue scheme, has approximately 110 hours total time and is a 9+ inside and out. Pictures and full details about this airplane are available on the EAA Chapter 517, Inc. website: [www.eaa517.org](http://www.eaa517.org). In addition to the Grand Prize KitFox, 1st prize will be a Garmin GPS, and 2nd prize will be a Lightspeed ANR headset.

This sweepstakes is unique because Chapter 517 will only offer a maximum of only 4,000 tickets. The odds of winning will be based on how many ticket are actually issued. The Chapter hopes to receive donations for a minimum of 3,000 tickets to see an appropriate return on the generous donation made by one of our Chapter members. A donation of \$25.00 is requested for each ticket or 10 for \$200. The drawing for this sweepstakes will be held on March 5, 2005.

<http://www.eaa517.org/Sweepstake.htm>

airport crowd. The following sections will now discuss the various ways the wheel landing might be used.

### Maximize Forward Visibility

One of the most obvious benefits of a wheel landing is that it provides for better over-the-nose forward visibility. This can be particularly beneficial for airplanes where the over-the-nose visibility is limited and where the runway inconveniently disappears as the noise is raised for the proper three point touchdown attitude. Since the airplane is essentially level during the wheel landing, it offers a better view of the runway at just the time when good visibility can be critically important. In this situation, with no other factors involved, the timing for setting the tail down is not critical and the tail is usually set down as soon as airspeed permits with little effort made, in the form of a forward stick position, to keep the tail flying. It is important that at the exact moment the tailwheel contacts the runway the stick should be quickly pulled fully back to insure positive directional control while the transition to taxi is made.

On a final note, I want to mention yet another type of landing sometimes referred to as the tail-down wheel landing which is used by some pilots of airplanes with poor over-the-nose visibility. The tail-down wheel landing combines the improved visibility of the standard wheel landing with the lower-energy touchdown of the three point landing by dropping the tail as far as it can be safely done just before touchdown. Let it be noted that the tail-down wheel landing requires a bit more finesse and control than the standard wheel landing.

### Matching Traffic Pattern Flow

A situation which often comes up is the one where a classic rag-wing taildragger finds itself rubbing elbows in the traffic pattern with its more contemporary all-aluminum or all composite tricycle cousins who scoot

about the pattern as if the laws of aerodynamics fall apart at power settings below 75%. In these situations rag-wing pilots can make themselves more compatible with traffic flow by keeping their airspeed up as much as is practicable and safe. The wheel landing lends itself nicely for this purpose since it inherently allows for somewhat higher airspeeds both in the approach and at touchdown. Even the roll-out can be adapted by the use of a high-speed taxi to expedite an exit from the active runway if the need should arise. The high-speed taxi for taildraggers is perhaps analogous to the step taxi for floatplanes and is done with just enough extra engine power to sustain the speed needed to keep the tail flying while the airplane rolls along the remaining length of runway to reach the taxiway. As the airplane approaches the taxiway, the pilot should allow a safe distance to slow enough to set the tail down for a smooth transition to a slow taxi prior to exiting the runway. I would like to caution low-time taildragger pilots that the high-speed taxi is an advanced maneuver and should be first tried with a flight instructor present. There may also be conditions that are not conducive for this maneuver without greater experience.

### Adverse Wind Conditions



A Beech D-18.

## The Taildragger poem

Author Unknown

Taildragger, I hate your guts!  
I have the license, ratings and such.  
But to make you go straight is driving me nuts.  
With hours of teaching and the controls in my clutch,  
It takes a little rudder, easy, that's too much!

You see, I learned to fly in a tricycle gear,  
With one up front and two in the rear.  
She was sleek and clean and easy to steer.  
But this miserable thing with tires and struts  
Takes a little rudder, easy, that's too much!

It demands your attention on the take-off roll  
or it heads towards Jone's as you pour on the coal.  
Gotta hang loose, don't over control.

This wicked little plane is just too much!  
With a lot of zigzagging and words obscene,  
I think I've mastered this slippery machine.  
It's not that bad if you have the touch;  
Just a little rudder, easy, that's too much!

I relax for a second and from the corner of my eye,  
I suddenly realize with a gasp and a cry,  
That's my own tail that's going by!!  
You ground-looping wretch; I hate your guts!  
Give a little rudder, Great Scott! THAT'S TOO MUCH!!!



Now we have to consider a more dangerous scenario, although, I am not referring to the gusty wind or crosswind conditions. What I am referring to is starting a discussion about one of the more controversial topics of taildragger flying and that is whether wheel landings are the only type of landing to be used in adverse wind conditions. For the proponents of this school, gusty wind or crosswind conditions are frequently on top of their list of situations where wheel landings are needed. However, I know very capable high time taildragger pilots who fall on both sides of this argument, some passionately.

The theory regarding gusty wind conditions is that the inherently higher airspeeds of the wheel landing allows for a gust factor all the way to touchdown as well as providing more effective control response. Even moderate gusts can be a significant issue for airplanes with slow landing speeds. Additionally, the ability to apply a bit of forward stick pressure to reduce the wing's angle of attack provides some of the same sort of gust suppression that tricycle airplanes have as long as the airspeed is high enough for the tail to remain flying. However, this is usually as far as the explanation goes. What is missing is that eventually the tail has to be set down. It is assumed that the tail will stay flying long after the wing can no longer produce enough lift for flight even in a



A Spartan 7W.

sudden wind gust. At which time the tail can be set down. However, directional control is increasingly tenuous during roll-out as the airspeed slows to the point described in the previous sentence. If the tail is set down early to retain directional control then some of the benefits are neutralized. Furthermore, wheel landings are more susceptible to a "bounce" and in choppy air it may be tough to control how hard the main gear will touch-down. In this situation it helps to have an airplane with yielding and well damped landing gear that offers enough delay to allow for the application of enough forward stick pressure to stifle the "bounce".

It seems that crosswind conditions almost always imply gusty wind conditions as well so any of the previous comments also apply. The inherently higher airspeeds allowed by wheel landings also provide another benefit for crosswinds. If you remember your wind triangles you can probably visualize that in cross-controlled flight a higher overall airspeed will produce a higher sideways airspeed component that can be used to cancel a higher crosswind component. This can be helpful for airplanes that have a slow landing speed. In fact, a good candidate for the consideration of the use of wheel landings during adverse wind conditions would be light, slow landing airplanes with yielding and well damped landing gear. Such airplanes might be the likes of the Taylorcraft BC12, the Piper J-3 Cub, or the Aeronca 7AC Champ.

Perhaps this might be a good time to explore what might be some misperceptions regarding the use of three point landings in adverse wind conditions. Since it is argued that the extra speed inherently allowed by wheel landings is required to establish a gust factor, it is implied that a gust factor is not possible to obtain in a three point. There is no reason why a three point can not be performed initially with little extra airspeed to maintain an adequate gust factor. For adverse wind conditions,

the approach, flare, and hold-off for the three point can be conducted in nearly the same way as is done for a wheel landing. The difference is that the throttle will be closed during the hold-off and the hold-off will be sustained just a bit longer to bleed off the extra speed and to the rotation into the three point attitude. For crosswind conditions, a slightly longer hold-off also means slightly more time to fight off drift. This alone is why some pilots prefer wheel landings. If the three point is ever so slightly over rotated, there can also be a slight reduction in the wing's angle of attack at touchdown to reduce lift below that required for flight for the airspeed at touchdown. Calling the three point landing a full stall landing is for the most part a misnomer, and albeit diminished, many airplanes retain adequate control authority throughout the three point landing, perhaps aided by ground effect. By the time airspeed slows to the point that there is no margin left for gust factor, the airplane is close enough to the ground that many airplanes can safely manage the affects of the erratic airspeed variations caused by the gusty conditions. The main benefits here is that the three point is less susceptible to "bounce" and that the tailwheel is already firmly on the ground at the beginning of the roll-out providing early on the most effective directional control. By using the three point



A DeHavilland DH-82 Tiger Moth (replica ?)

landing the pilot is opting for more work during the hold-off rather than having to deal with more work in the roll-out.

### Conclusion

Wheel landings tend to be a mystery for tricycle pilots transitioning to taildraggers. Described above are techniques that I have seen used with consistency and to great success by many accomplished taildragger pilots. Although, it should be expected that the passionate debate regarding wheel landing technique will continue. Furthermore, I have even heard more than one respected flight instructor relent under pressure that many airplanes can be safely flown over a pilot's life time without ever using wheel landings. This is probably why it is easy to encounter pilots who get along accident free year after year who possess very poor or even nonexistent wheel landing capabilities. However, one recommendation that I would make it would be that most taildragger pilots should achieve and maintain proficiency with wheel landings. If the rust is layered on a bit thick I would encourage flying with a respected flight instructor. At the point that wheel landings are as natural as three points you can follow your own instincts as to which technique will work best for you and the airplane you fly.



*A Piper PA-22/20 Pacer conversion.*

## EAA's Aviation Services

EAA members are one call, email or letter away from a wide range of technical aviation services available from the Aviation Services Department at EAA. First and foremost, the Aviation Services Team is responsible for answering member technical inquiries relating to pilot and aircraft issues. This one-on-one consulting covers everything from "How do I register my homebuilt?" to "What's involved in the A&P exam" to "How do I convert my ultralight for the new sport pilot rule?" and more.

Experienced pilots, aircraft owners, homebuilders, ultralighters and sport pilot specialists staff the department. Their personal and professional experience enable them to field just about any technical aviation question that comes their way. And if they can't answer your question right away, they'll do the research needed to help guide you to the right resource or solution. EAA's in-house library is an additional resource the Aviation Services team counts on for information and the library is also available to members visiting the Oshkosh headquarters offices.

The Aviation Services Department supplies a great deal of the technical information found on the Members Only portion of EAA's website at [www.eaa.org](http://www.eaa.org). The Homebuilders Headquarters section on the site provides a wealth of information on building, maintaining and flying an experimental amateur built aircraft. A significant amount of the content on EAA's Sport Pilot website page is also developed by the Aviation Services team.

Two of the most popular "hands on" offerings from the Aviation Services Department are the Technical Counselor and Flight Advisor programs. There's a network of over 1,000 EAA members across the US who are regis-

tered EAA Technical Counselors that will come to your homebuilding location to provide in-progress inspection of your project. The Flight Advisor program has several hundred EAA members who will provide advice and assistance on taking that first flight in your new home-built aircraft.

FAA Medical assistance is one of the individual offerings also available from the department. If a member needs assistance receiving a special issuance from the FAA, Aviation Services personnel will track the application all the through the process until approval to ensure that nothing derails your application. In addition, we have a network of doctors that are AMEs and EAA members who volunteer their services to help other members retain or regain their medical.

For more information on your EAA Technical Services offerings please call 1-800 -EAA-INFO. They're ready for your questions!

### Dan Checkoway's METAR webpage

Have you folks tried Dan Checkoway's METAR webpage?

[www.rvproject.com/wx/decoded\\_metars.jsp](http://www.rvproject.com/wx/decoded_metars.jsp)

Go to the bottom of the sheet and plug in KHIO and, say, 100nm radius for a picture of the regional conditions. It refreshes the data every five minutes; if you notice it resetting itself back to L.A., you need to allow cookies from this site.



## 2005 Aviation Calendar

Feb 10-12	Ontario, CA Soaring Society of America National Conv. 505-392-1177 <a href="http://www.ssa.org">www.ssa.org</a>
Feb 26-27 '05	Puyallup, WA Northwest Aviation Conf 866-922-7469 <a href="http://www.washington-aviation.org/">www.washington-aviation.org/</a>
Mar 6-9	Baja California, Mexico; El Galito Baja Bush Pilots Whales 2005 Trip II; 480-730-3250
Mar 15	Scottsdale, AZ (SDL) Business Aircraft & Jet Preview
Mar 19	NW Av Safety Education Symposium 360-771-5691 or 503-636-4930
Apr 12-18	Lakeland, FL; EAA Fun 'N Fun Fly-In, 863-644-2431 <a href="http://www.sun-n-fun.org">www.sun-n-fun.org</a>
Apr 29– May 1	Mojave, CA; West Coast Formation Clinic, <a href="http://www.lancairlegacy.com/Formation">www.lancairlegacy.com/Formation</a>
May 19-21	Hayward, CA (HWD) Hayward Proficiency Air Race 925-784-7128
May 27-29	Watsonville, CA; Watsonville Fly-In; 831-763-5600 <a href="http://www.watsonvilleflyin.org">www.watsonvilleflyin.org</a>
Jun 4	Frederic, MD; AOPA Fly-In; 800-USA-AOPA
Jun 13-15	Paris, France; Paris Airshow 2005
Jul 6-10	Arlington, WA; EAA Arlington Fly-In 360-435-5857 <a href="http://www.nweaa.org">www.nweaa.org</a>
Jul 18-21	Vancouver, WA; ShortWingPiperClub Convention, <a href="http://www.columbiariverswpc.org/ConventionPg.htm">www.columbiariverswpc.org/ConventionPg.htm</a>
Jul 25-31	Oshkosh, WI; EAA Oshkosh Fly-In; 920-426-4800 <a href="http://www.airventure.org">www.airventure.org</a>
Aug 19-21	McMinnville, OR; NWAAC Antique Aircraft Fly-In; <a href="http://www.nwaac.org">www.nwaac.org</a>
Sep 3	Prosser, WA; Prosser States Day Celebration & Fly-In 509-786-3177 <a href="http://www.prosserchamber.org/states_day.htm">www.prosserchamber.org/states_day.htm</a>
Sep 9-11	Hillsboro, OR; Oregon Int'l Airshow – Hillsboro; 503-629-0706 <a href="http://www.oregonairshow.com">www.oregonairshow.com</a>

Sep 15-19	Reno, NV; Reno Air Races; <a href="http://www.airrace.org">www.airrace.org</a>
Nov 3-5	Tampa, FL; AOPA Expo; <a href="http://www.aopa.org/expo/2005">www.aopa.org/expo/2005</a>

## Chapter Calendar

Feb 5	HIO Twin Oaks EAA 105 Pancake Breakfast 503-646-8763
Feb 10	EAA 105 Chapter Meeting @ 7:00 PM Dan Benua's RV-10 Project, NW Portland
Feb 17	EAA 105 Board Meeting @ 7:00 PM Benton Holzwarth's house, Tigard <a href="http://www.tinyurl.com/57rjb">www.tinyurl.com/57rjb</a>
Mar 10	EAA 105 Chapter Meeting @ 7:00 PM Annual visit to Van's Aircraft, Aurora.
Mar 17	EAA 105 Board Meeting @ 7:00 Location TBA
Jun	Van's Air Force-Homewing / EAA 105 RV Fly-In,
Aug	EAA 105 Poker Run



*"We will begin serving lunch in a few minutes. Our selection today is a barbecued croissant sandwich..."*

## Board Meeting Highlights

Your Chapter 105 Board

The January meeting of the EAA Chapter 105 Board was held at John Halle's office at Stoel, Rives, in downtown Portland on 20 January 2005, beginning at 7:10 PM. Rion Bourgeois, John Halle, Ed Mason, Joe Blank, Dick Van-Grunsven, Benton Holzwarth, Mike McGee and Jenny Hickman attended.

- The December meeting minutes were accepted without corrections.
- Joe Blank reconsidered and agreed to accept the invitation to join the chapter board. A motion was approved to add Joe to the board. Welcome aboard, Joe.
- Chapter RV-6 kits: Greg Halvorson's purchase of the chapters RV-6 sub kits for \$2200 was officially noted.
- Bogardus Trust: The Trust needs two additional trustees to fulfill their requirement for at least five members. Randy Lervold and Jerry VanGrunsven were recommended as possible members and each has agreed to the nomination. The board moved and approved each (Randy to a four year term and Jerry to a three year term to best match the normal staggered rotation) as new Trustees of the Bogardus Trust. Congratulations and thanks, gentlemen.
- The green lathe (Benton): No progress.
- Project Hangar (Rion): The chapter has put down \$575 with the Stark's as first/last month's rent on two spaces at the end of the new row of hangars the Stark's are building at Twin Oaks. Bob will leave out the partition between the two spaces leaving us a single, larger area. Rion was quoted a price of \$3200 for a 125 A electric service (including the 750' run) -- if it's to be used for projects, we'll need more power than the couple lights worth the standard hangars will be provided.
- Upcoming meetings (Randall): Feb: The presentation

by the SpaceShipOne project manager will be at the chapter hangar at Twin Oaks; Mar: The annual Van's Aircraft factory tour; Apr: Randy Lervold's RV-3B project. [Late breaking news: The SS1 presentation is scratched for now — going ahead with visit to DanB's RV-10. -Ed.]

- B-17 Visit: Nat'l has offered us hosting duties for the B-17's visit to the area on Memorial Day, basing out of HIO. "Aluminum Overcast" is still out of service, so they're campaigning "Fuddy Duddy," on loan from the Wings of Eagles Discovery Center, Elmira, NY.

We were planning to share duties (and rewards) with chapter 902 last year before Aluminum Overcast's mishap. The board considered and has agreed to offer a similar arrangement (we each provide half the four 'lead' volunteer positions and split the rides and cash) with 902 again this year. Fuddy Duddy carries more seats so this time, there will be six seats available for the run up to Seattle.

Rion has offered to cover the visit paperwork requirements and Ed Mason will handle PR. We'll contact 902 about their interest in filling the other required leads and both chapters will be tapped for the volunteers needed to handle crowd control and merchandise sales, etc, if they're interested.

JohnH suggested trying to tap PGE, etc, as a local 'sponsor', not for financial assistance (the visit costs us nothing) but rather to take advantage of their connections with the local media.

- Young Eagles (Harvey): No report.
- Chapter Hangar Sign (Woody Hall): There has been some contact with a sign making company, but there was no further info available.
- Breakfast Duties: MikeM suggested we consider him the quartermaster until further notice, rather than wondering every month who'd be handling the provisioning. Mike also sought clarification on how to make sure the guy who supplies the bacon is promptly paid. He leaves

his invoice with the bacon, in the freezer, and it's easily misplaced as the breakfast operation commences.

Volunteer turn-out has been superb since Len Kauffman has begun handling the kp-duty reminder calls. Thanks, Len!

- Holiday Banquet: As reported last month, we came out \$100 under budget. The board moved to apply the balance to gifts for the ladies who put the party together, JennH, Dru Bourgeois, Marcy Lange and Janet Wentz. (Jenny turned sneaky, and split the money three ways with \$35 gift certs to Crate 'n Barrel for the other three, saying all she did was provide the venue. Yeah, sure...)

### **New Business**

- Hangar Space: Bob Stark is no longer parking one of his customer planes in our chapter hangar, so we have space available again. If anyone needs hangar space, we have a spot available for \$120 / month.
- Poker Run: It's about time to begin planning for this year's event. Jenny has set it up in June in past years, but we'll try August this year, to hopefully improve the weather odds. We'll pick one of the weekends to miss the annual NWAAC fly-in [ Aug 19-21, 2005 ].
- RV Fly-In: MikeM (fly-in head honcho) notified us he'll be out of the country during this year's RV Fly-In, in June. He'll continue to organize things until then, but needs someone to fill in as show-boss on the day of the event. Joe Blank offered to fill the top spot, and Mike insists that the person doing that not try to double-duty with other positions, so the search is now on to find a person to fill in the other work Joe was going to do at the fly-in.
- Lancair Formation Clinic: John Halle brought up a Lancair Formation Clinic getting organized down in Mojave, CA, in late April. We'll plug it in our NL, and see if our local formation folks have anything they can share with this new group.

- Bogardus Little GEE BEE restoration: DickV shared results of the presentation at January's chapter meeting. He'd put out sign-up sheets for folks to join mail lists for interest in either 'captain'ing a team or being general volunteer workers. About 20 signed up, and five made it to the following Saturday's work session, even with the ice in the area.

Mike Story has joined as a particularly enthusiastic member. Rion will handle the restoration 'accounts'. So far, expenses have been minimal, but there will be some larger purchases later. The board agreed that expenses would be paid from the Bogardus Trust account rather than using chapter funds.

- Homewing NL Archive project: MikeM has been working on an archive of the Homewing newsletters. He's handed that off to AmitD now.
- The Puyallup Fly-In / Tradeshow was mentioned as a possible group fly-out, and I (Benton) was prodded to make sure a prominent notice goes into the NL.
- Chapter Accounts: JennyH offered a quick synopsis of the chapter accounts, summarising that chapter 105's accounts grew by \$8400 in 2004.
- Tools - Borescope: John Halle suggested that a borescope might make a good addition to the chapter tool set. The board agreed that it sounds interesting, without committing. John is off to do some research and will report back.

The next board meeting will be a Benton Holzwarth's home, at 7:00 PM, Feb 17th. The address is 9240 SW Millen Dr., Tigard, adjacent to Tigard HS. 503-684-2008. A map is available here: <http://www.tinyurl.com/57rjb>



## 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.

### February '04

- Carl Battjes / Report from the Design Group
- Mike McGee / Jan Meeting: Aurora Airport — Kent Byerley's RV-9A
- Mike McGee / Experimenting — Pre-flight-able Brake Reservoirs
- Ed Anderson / Ducts Vs Diffusers — Cooling

### March '04

- Randy Lervold / New Web Site Up!
- Benton Holzwarth / Birds of a Feather — Special Interest Groups
- Mike McGee / Feb Meeting: Randy DeBauw's RV-10

### April '04

- Dick VanGrunsven / Little Gee Bee Restoration
- Mike McGee / March Meeting: Van's Aircraft at the Aurora Airport

### May '04

- Carl Dugger / Chkalov Update
- Mike Robertson / OK, NOW What Did I Do?
- Randy Lervold / A Perspective on Testing
- Mike McGee / April Meeting: Ralph Hudson's Strojnik S2 Motorglider
- Bob Duncan / Balanced Lobbying at the Port of Portland
- Amit Dagan / A Methodology for Planning Your Wiring Process
- Randy Lervold / Window of Vulnerability
- Denny Jackson / Denny Jackson Takes Flight

### June '04

- Joe Blank / N6810B's First Flight
- Don Hammer / What I Did on My Summer Vacation:

Three Days on Lake Washington

- Jenny Hickman / It's Poker Run Time Again!!!
- Carl Dugger / Excitement Builds for the Russian Visit to Chkalov Days Celebration
- Mike McGee / Getting ready for the 13th Annual Northwest RV Flyin
- Amit Dagan / Do You want To Do It On The Table, Or Would A Mattress Be More Comfortable for You?
- Mike McGee / May Meeting: the Hillsboro Airport — Mike McGee's Alternative Engine Showcase
- Nat'l HQ / Pilot and Actor Harrison Ford Accepts Chairmanship of EAA's Young Eagles program
- Benton Holzwarth / AOPA Fighting for Crosswind Runway at Mahlon Sweet Field, Eugene
- Jess Frost / Benefit Dinner for Chkalov Cultural Exchange Committee
- Bob Duncan / Port of Portland -- Community Meeting on HIO Airport Noise and Helicopter Issues

### July '04

- Jerry VanGrunsven + Jerry & Judy VanGrunsven, Paul & Joan Good / Alaska!
- Amit Dagan / NW RV Flyin—"On a Day Like This You Should be Flying."
- Benton Holzwarth / NW RV Flyin—A First-Timer's Visit to the VAF Homewing Fly-In
- Amit Dagan / A Custom Ground Block
- Benton Holzwarth / June Meeting: Dietz Airpark — Ken Scott and Ken Krueger's Scratch Built Pipsqueak Project

### August '04

- Mike McGee / The Third Annual Chapter 105 Poker Run
- Jerry VanGrunsven + Jerry & Judy VanGrunsven, Paul & Joan Good / Alaska! Pt. 2

### September '04

- Ann Marie Smith / IAC-67 Event Notice!! Earn Your IAC Smooth Patches!

- Marcy Lange / Thank You, Thank You, Thank You
- Randall Henderson / Hillsboro Airshow EAA Flyby
- Randy Lervold + Cassie Lervold / Formation Flying
- Amit Dagan + Gail Dagan / First Flight -- The Toolmeister's RV-7
- Mike McGee + Dunstan Fandel / Aug Meeting: Aurora Airport -- Kent Byerley's RV-9A

### October '04

- Carl Battjes / The Joy of Slow and Simple
- Randy Lervold / Formation Flying Materials Now Available
- Benton Holzwarth / Progress Report: Randy Griffin's RV-8

### November '04

- Randy Lervold / New Prop Balancer Program!
- Amit Dagan / WHEN'ZITGONNABEDONE?
- Mike McGee / Oct Meeting: Hillsboro Airport — Condition Inspection with Randall Henderson, Dan Benua and Randy Lervold

### 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)

## 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

### Amit's Stuff For Sale + Offered to the Local Group First

Check the retail price and make me an offer: Position lights (Aeroflash, non PMA) one green, one red (Wicks 073-0529g12, r12) for 12 Volts; Over-Voltage protection module (B&C OVM-14); Large starter button with special boot (ACS P/N SPB01); Glare shield guard (Cleveland acft tools P/N GSE54 ); Magneto wires pass through the baffles with this wire seal (two-wire) (ACS #375); Rudder cable fairings (2 pairs, made from aluminum); VHF (Comm) bent whip antenna (ACS P/N 11-00647); 3/32" clecos (silver, from Van's) 1 or 2 hundred; 1/8" clecos (copper, from Van's) 1 or 2 hundred. Amit Dagan 503-292-9780 or amitdagan@hotmail.com [05/05]

**RV-3 WANTED** -- I'm looking to buy an RV-3 in most any state of condition: (1) A Project, (2) a "has flown" without the motor and prop, or (3) even one that has been damaged and is now needing repair to get back into the air. I will consider a "ready to fly", but I do have a motor, already, that I was wanting to make use of. All leads greatly appreciated. Dave Red 541-466-5119 or dred@centurytel.net [05/05]

**Continental A-65 engine** — completely disassembled for your inspection. Price is \$5000 firm. All parts have been inspected & yellow-tagged by Premier Aircraft Engines of Troutdale, Oregon. Cylinders are .015" oversized. They have all new intake and exhaust guides, all new keepers, and all new Stellite (100 octane) exhaust valves (part number 21479). Crankshaft is standard. Cam is new. Case and accessory cover checked for cracks. Everything else has been inspected and found airworthy.

Does not include any accessories. Pistons and rods to convert to 75hp are available. Mark Pearson neat1s@yahoo.com or 503 740-3853 [04/05]

**RV-4 Empennage** — 90% complete. Avery's RV builder's tool set (the big one) with extras including pneumatic squeezer and extra yokes. Clarence Potts 503-670-9060 [04/05]

**RV-3 for Sale** — 0-290 power, about 900 hours engine and airframe, free of electrical system, lights, and avionics, finished about 1982, flew through summer of 2002. \$13,000. call Irv Kurz, 503-621-9649 [03/05]

**3HP Air Compressor for Sale** — 20 Gallon tank with wheels. Oil lubricated, belt drive. 15A @ 115V. RV construction veteran. \$125. Call Dan Benua 503-702-5387 [03/05]

**Hangar Mate Needed** — to share large HIO space with two RVs for \$150/mo. Ideally this would be a Piper high-wing (Tri-Pacer/Colt) or a vintage C-182. Alternatively, if you would like to store your boat/glider/precious car in a locked hangar in a fenced airport, please contact Bob (503-771-6361) or Amit (503-292-9780) [02/05]

**RV Parts** — Stainless steel outboard landing gear fairing brackets (U-808). Available in 18 gauge and 14 gauge. Will not break like aluminum brackets. \$20 for set of two. New complete 60 amp alternator kit. All mounting brackets have been primed and painted. Includes brace between alternator and starter. \$220 (\$30 off Van's price). RV-6/8 Pre-punched Empennage video set from George and Becki Orndorff. \$20. Len Kauffman 503-885-1920 or lakauf@comcast.net [02/05]

## 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** — Ore-

gon Media, Phil Spingola phillip@OregonMedia.com or 503-201-4896

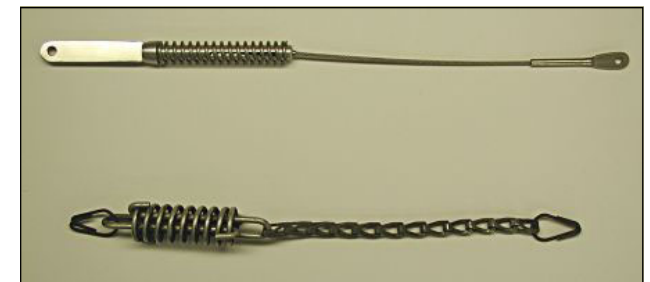
**Duckworks Landing Lights** — Standard kits start at \$75. Round Halogen and Xenon HID lights are available for new installations and upgrades of our kits and others. For details/pricing see [www.duckworksaviation.com](http://www.duckworksaviation.com) or call 503-543-2298

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

**AEROFRAME Gallery — Aviation Merchandise and Custom Picture Framing** — Located at the intersection of I-205 and 99E (McLoughlin Blvd.) in the Oregon City Shopping Center, AEROFRAME Gallery offers a huge selection of collectible airplane models, aviation art, and aviation related items for all ages. Non aviation art is also available. Visit the gallery and/or the website to view the gallery, its items, and the custom frame selections. 503-557-1333 [www.aeroframegallery.com](http://www.aeroframegallery.com)



**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](http://www.vansaircraft.com) or 503-678-6545





<b>“Contact!” Chapter Officers and Staff</b>		
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**Randy Lervold** 360-817-9091, randy @romeolima.com, Ch. 105, RV-8 & RV-3B bldr, Vancouver-Ptld  
**Dave Lewis, Sr.** 503-888-0989, Ch. 105, multiple RV bldr, HIO-Ptld  
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**Mike Robertson** 503-615-3237, Mrobert569 @hotmail.com, FAA AI, RV-8A bldr, HIO-Ptld  
**Don Wentz** 503-543-3653, jwentz @centurytel.net, Ch. 105, RV-6 bldr, Scappoose-Ptld



### **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: \_\_\_\_\_  
 \_\_\_\_\_ Project (Let us know what you're working on): \_\_\_\_\_  
 City/St/Zip: \_\_\_\_\_ Completed: Yes / No / 90% done 'n 90% to go: \_\_\_\_\_  
 Home Ph: \_\_\_\_\_ Pilot Ratings: \_\_\_\_\_  
 Work Ph: \_\_\_\_\_ Additional (help for other builders?): \_\_\_\_\_  
 e-addr: \_\_\_\_\_  
 Spouse's Name: \_\_\_\_\_



The factory RV-10 at Arlington '04.

### Next Meeting

#### VAF-Home Wing / Chapter 105

- Dan & Sun Benua's RV-10 Project
- Thursday, February 10, 2005 at 7:00 PM
- Skyline Blvd, Northwest Portland
- Map and Info — Page 4



#### Chapter 105 Board of Directors Meeting

- Benton Holzwarth's House
- 9240 SW Millen Dr., Tigard 503-684-2008
- Thursday, February 17, 2005 at 7:00 PM
- Tigard (Map: [www.tinyurl.com/57rjb](http://www.tinyurl.com/57rjb))



Editor:  
Benton Holzwarth  
EAA Chapter 105  
9240 SW Millen Dr.  
Tigard, OR 97224-5570

To:

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

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