



The Newsletter of the Home Wing of Van's Air Force; Builders and Fliers of Van's RV Series Aircraft



**FEBRUARY MEETING**

Last month's meeting was held at Steve Householder's place in the Portland West Hills area. Steve has been working on an RV-6A for 8 years now (I guess he started just a little while before us...). Jerald wasn't able to make it to the meeting, so Don Wentz took care of running things. Thank you, Don!

Unfortunately, since we weren't there, that's about all I can say. I can add, that knowing Don's art of persuasion, I'm not surprised that he was able to find someone to take over the newsletter for us...Randy Lervold has graciously volunteered his services...so the next newsletter will be his creation. Many thanks to Randy...he has some great ideas and we look forward to a new perspective. And now I can concentrate on baby riveter #2!



**MEETING NOTICE -- Frank Justice, Meeting Coordinator**  
(503) 590-3991 Frank\_K\_Justice@ccm.ssd.intel.com

Place: Harmon Lange's home 33094 Church Road, Warren, OR Date: March 12th (2nd Thurs. of every month) Time: 7:00 pm
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The March meeting of the Homewing RV Builder's group will be held at Harmon Lange's home in Warren, Oregon. Harmon makes all the landing gear for Van's Aircraft, has built an RV-4, and I believe is now working on an RV-6A.

To get there, take Hwy 30 North to the town of Warren (5 miles North of Scappoose). Turn left on Church Road. Go 1.5 miles to a stop sign. Go straight about .4 mile. Turn Right into the yard opposite a huge tree.

**EVENTS CALENDAR**

**EAA Chapter 105 Monthly Meeting**

Thursday, March 19th (3rd Thurs. of every month), 7:00 pm, at the EAA 105 Hangar/Clubhouse, Twin Oaks Airpark:

**EAA Chapter 105 "Breakfast at the Aileron Cafe"**

Saturday, April 4th (first Saturday of every month) at Twin Oaks Airpark, 8:00 am.



**SUBSCRIPTIONS DUE**

Look at the date under your address on the cover. THAT IS THE DATE YOUR \$10 IS DUE. Use the form at the back of this newsletter to subscribe or renew. If you are paid up but the date doesn't reflect this, please give the Editor a call so he can correct it.



**HANGAR HUMOR**

*from the internet*

For months after California's Northridge earthquake of 1994, aftershocks rocked the San Fernando Valley and Van Nuys Airport. One morning about three weeks after the initial quake there was a particularly sharp aftershock. Moments later on Van Nuys' ground control frequency:

"Uh, four three kilo would like to file a pilot report for moderate turbulence on the east taxiway..."



**VACATIONING IN MEXICO...RV STYLE**

*by Bill Benedict*

Several years ago I flew a 182 down to Reno for the Reno Air Races. As I was taxiing in I noticed an RV-3 taxiing into a parking area. I remember commenting to a passenger that the RVs were a sport plane and not a good transportation aircraft. Boy was I ever wrong! What follows is the 3rd major trip for N894RV, which just celebrated its 8th year of flying and now has 536 hours. I will say it one more time: "The more you fly them, they more you like them!"

Dan Delano (RV-6) and Carl Hay (RV-6) make periodic trips to Mexico and have been inviting me along for several years. It seems that I always had an excuse why I could not go. With this invitation, I had a new engine just itching to accumulate some time so I succumbed to their invitation and we departed on Friday the 13th. Weather was not all that good, but what can you expect from the 13th in Oregon. It was not raining so we were off with 3 aircraft and 6 souls as the FAA likes to refer to us. Carl was taking a friend and the friends girl friend decided to go so I had a passenger, who had never flown in small planes before. Dan and his wife Carol were the third aircraft. The weather routed us over Reno and we stopped at Minden Nev for fuel and lunch. I noticed my right brake was soft so I check it and tightened a fitting that was seeping fluid and we were off. The next stop was Imperial Valley Calif for fuel and an overnight. I asked my passenger if I could take liberty with one roll on the trip, so just before landing I made a nice easy roll to the left. She squealed with delight so several more followed, each accompanied with noise from the back seat which I shared with everyone listening to 122.75.

The next morning as we all were performing the runup, Dan noted a poor to nonfunctional mag so we were back to the ramp. After taking it apart several times we borrowed a truck and visited an 80 year old barnstormer who just happened to have a coil which created all the sparks we felt necessary so we were ready just as the sun was going down.

The next morning it was off to Mexicali on a 10-minute flight for the triplicate exercise. Everything in Mexico is done in triplicate. Plane registration, visitor visa, flight plan and landing fee, all in triplicate. We were out \$3.00 and they used \$5 worth of paper and labor. Two hours later we were in Mulege drinking margaritas in the sunshine. Ahhhhh, warm weather, sunshine, a hotel adjacent to the runway and lots of margaritas. Now this was a vacation!

We took day trips to Loreto for gas (requiring lots of triplicate forms) and breakfast, whale watching, a taxi ride to go kayaking, walks into town, a different restaurant almost every night and margaritas. A lot of time to read between trips and the margaritas.

On Friday the 20th we went over the hump to Laguna San Ignacia for a whale of a trip. There were 258 whales in the bay and we went out on an 18 foot boat and motored among the gray whales. They were all around and several slid underneath. Dan and Carl were able to see one under the boat that stopped and looked up at them. Dan's comment was that he saw a 4-foot jaw with an eye near the end staring up at him. Quite a sight! Later that day we departed from Dan and Carol who were remaining a little longer and Carl and I flew up to San Felipe for fuel and the night. Guess what we drank?

The next morning, with 12" N-numbers we crossed back into good old USA at Calexico, clearing customs with a very courteous crew and were on our way to Tonopah NV after deviating to the east due to el Nino depositing water in the area of California. Dodged through a front and landed at Winnemucca in a blowing sleet filled rainstorm. Boy was it good to get down! To the casino to loose my \$10 worth of quarters and off to bed.

The next morning was bright and sunny until we walked to breakfast when a snowstorm dumped on us. By the time we got to the airport the weather was VFR. A crew of RV builders were awaiting our arrival and after kicking the tires for 20 minutes we were off. The weather was broken to scattered and had no problem getting to HIO and 7S3.

It was great. Plan to go again! Did I tell you they had margaritas down there?! Not bragging, but with Carl and Dan setting the pace with 160 c/s and 150 fp respectively, the -4 (180 fp) burned about 7.5 gph and took less fuel at every stop with the exception of one where I took 1 liter more than Carl.

Respectively submitted, Bill B



**YOUR SAFE RETURN TO EARTH (Part 3 of 3)**

*As Published In: SOARING and SPORT AEROBATICS MAGAZINES (June, July & August 1992) By: Allen Silver*

In Part 2 I left you hanging, literally, above the ground under a fully opened parachute. Take just a moment to thank God, breathe deeply and absorb the situation be-



**YOUR SAFE RETURN TO EARTH (Cont'd...)**

fore getting back to work. There is still much to be done before your ultimate goal of a successful emergency bailout is completed. Become familiar with the steering system your parachute has. If your parachute does not have a steering system you are basically at the mercy of the wind as to where you will drift and how you will land. I strongly suggest having your non-steerable parachute modified to make it steerable or upgrading to a steerable parachute. Then have your rigger thoroughly explain it to you. This is like the stick in your aircraft or your car steering wheel. Not having prior knowledge of its function or use may cause you to hit an obstacle, such as power lines or trees. Whatever steering you have, activate and take a hold of it after opening and do not turn it loose until you have landed. This would be like letting go of your steering wheel or stick. The newer parachutes have some form of ready-to-use-upon opening steering handles. Others require you to steer with the rear risers and some have a 4-line release. Whatever system you have become familiar now. During an emergency is not the time to wonder if you can steer your parachute. Whatever steering system you have, only pull down one rear riser or steering handle at a time. When you are through turning in that direction return it to its neutral position, but do not turn it loose. Round parachutes cannot be flared for landing like your aircraft or a rectangular skydiver's parachute. Pulling both rear risers or steering handles down at the same time can cause your parachute to lose altitude very rapidly. Remember, only one at a time. Do not pull the front risers down on any parachute that has four risers. This can greatly increase your rate of descent. To operate the steering system used on most modern parachutes grasp the two steering handles (usually 1" wide webbing) located above your shoulders. Some parachutes use metal rings. Usually the handles are a contrasting color. Your left hand grasps the left handle and the right hand grasps the right one. If you want to turn left, pull on the left steering handle until you've reached the desired heading then return the handle back to its neutral position. Do not let it go. Again, remember only pull down one steering handle at a time. You could cause your rate of descent to increase dramatically by pulling down both handles at the same time. Usually pulling down on the riser or steering handle 6-12 inches, on the side you want to turn, is all that is needed to turn your parachute. It's really quite simple and straight forward. However, lets say you injured your left shoulder on exit or opening shock and want to make a 90 degree left turn. What do you do? Simply, make a 270 degree right turn. The purpose of your steering system is to allow you to maneuver your chute to the most obstacle-free area possible. This should be away from roads where power lines are possibly located and hopefully it will help you to face into the wind on landing. Facing into the wind will set you up for the slowest possible descent and landing. Also, a steerable parachute will significantly dampen your oscillating, further reducing your landing speed and chance of serious injury. Do not

initiate any major turns low to the ground unless it is to avoid a life threatening obstacle such as power lines. Below 200 feet make only slight corrections to keep you facing into the wind. This will help dampen oscillation also, and prevent you from landing harder. To better understand how your parachute works let's assume your parachute has a forward speed of 5 mph. This speed can never be shut off, just like on your chute. This is the forward speed most steerable round emergency parachutes average today. If the wind is 0 mph you will go 5 mph in any direction you face. If the wind is 5 mph and you face into the wind your ground speed will be reduced to 0 mph. You will see the same landscape under you. This is the slowest possible way you can land. If you turn and run with the 5 mph wind you are now landing downwind at 10 mph. Obviously, to achieve the slowest possible landing you must face into the wind on all landings. This is the same principle used when you land your aircraft. Now, if the wind is 10 mph and you face into the 10 mph wind you will be backing up at 5 mph, which is the best you can do. You will see the ground moving out from between your feet and away from you. If you turned and ran with the wind you would be traveling at 15 mph and anytime you are running with the wind or the wind is less than the forward speed of your parachute the ground will be moving between your feet and out the back behind you. In other words, from front to rear. I would also like to reinforce the need for people with poor vision to try and secure their glasses or they may not be able to see details on the ground such as power lines.

Okay, hopefully, you have maneuvered your canopy to a clear landing area, have slowed your speed across the ground to the minimum and are facing into the wind. You are now ready to land whether you want to or not. Press your feet and knees tightly together for better support. Your toes should be slightly pointed to prevent landing on your heels. Your knees should be slightly bent and your legs tensed. Keep about the same tension as needed to bounce up and down on the balls of your feet a couple of inches off of the ground. Do not lock your knees. Keep your hands on the steering system. If you do not have one, grasp the risers above your head. Keep your elbows in and try to look at the horizon, not down at the ground. This will allow you to better judge your drift and to make minor steering corrections to keep you facing into the wind or quartering no more than about 10 degrees. Just prior to landing, the ground will probably look as if it's coming up fast. To minimize the possibility of injury make sure your feet and knees are tight together and your legs tensed. Try to absorb most of the landing on the balls of your feet. You just survived an emergency bailout and now is not the time to panic. A common mistake at this critical moment is to raise



**YOUR SAFE RETURN TO EARTH (Cont'd...)**

your legs or keep them apart at the moment you need their support the most. Again, remember to press your feet and knees tightly together. At touchdown tuck in your chin, pull your elbows in front of you to protect them and your face and roll whichever way the chute pulls you. This will help spread the landing forces throughout the balls of your feet, your legs, thighs and upper arms (shoulder area). If you land in high winds and are being dragged on your face you must first roll onto your back. If you have no canopy releases you can either release your chest and leg straps and slip out of your harness or grab one or two lines next to each other and reel them in (hand over hand) until the canopy collapses. If you use the first method release the chest strap first. If you release the leg straps first the harness and chest strap may slip up under your chin and choke you. When you reel your canopy in hand over hand you must hold onto the lines tightly to prevent friction burns to your hands. Keeping a tight hold of these lines, quickly get out of the harness in case a gust of wind reinflates it. Grabbing more than two lines next to each other is not necessary and it makes it very difficult to reel them in, because of the pressure. If you are able to get up on your feet after landing and are still in the harness you can collapse your parachute by running around it, if that's necessary. Once it's collapsed gather your chute tightly together to prevent it from reinflating. Then get out of your harness. Once you are on the ground and out of your parachute, the canopy can help you be located. Spread it out in such a manner as to attract attention from the air. In the event of a tree or power line landing you must throw your ripcord away prior to landing, if you haven't done so. It can snag in a branch and will conduct electricity if it contacts a power line. Keep your feet tight together to prevent you from straddling a limb or wire. Just before you land in a tree or wires fold your arms over your face to protect it and your neck. Try to make yourself as thin as possible. Once you stop, if not on the ground, do not move quickly so you can evaluate how well you're hung up. If you're high above the ground any quick movement may cause you to fall. Be prepared, after you come to a complete stop (and not before) to grab hold of a branch. You could seriously injure your arms trying to grab branches before you stop. You must first protect your face and neck. In my opinion a power line landing should be avoided at all costs even it means making a low turn and landing downwind. Hitting the ground hard and risking serious injury is still preferable to electrocution as far as I'm concerned. In the event of a water landing prepare for a regular landing because the water may not be very deep. I suggest you do not undo any straps until your feet touch the water. Some manufacturers say undoing the chest strap is all right. Check with the manual or the manufacturer of your parachute for their recommendations. Over the water your depth perception is off and releasing the chest strap may cause you to fall out of your harness prematurely. If you undo your chest strap (never leg straps) you must cross your arms in front of the harness to prevent falling forward. This pre-

vents you from steering properly, which is another reason I don't recommend it. When you enter the water hold your breath. You may go under the water. Quickly undo your chest and leg straps and swim away from your parachute to avoid entanglements. Don't panic, this will cause fatigue. If you are under the canopy, carefully follow a seam to the edge and swim free. If you are being dragged in the water collapse your canopy as you would for a land jump. Once you are out of the harness immediately swim away from the canopy and lines. Become totally familiar with getting your harness off without looking. You might want to practice while lying on your back, as if being dragged. Parachutes differ, so you must understand thoroughly how the snaps or friction adapters work on each parachute you may wear. If you fly over water often, flotation gear should be worn. Generally it is best if it is worn under the parachute harness so you can remove the harness and not remove the flotation gear in the process. Become very familiar with any flotation equipment you wear because if it's the inflatable type it probably cannot be safely inflated under the parachute harness without damaging the flotation device or crushing you. I suggest carrying a small unbreakable signaling mirror. This can be seen for miles. A whistle is also handy when someone is trying to find you. The noise carries further than your voice. Like the Boy Scouts, "Be Prepared". Some parachutes systems have a spot for some emergency equipment, but if you lose your harness/container (as in a water landing) it will do you no good. I recommend that you carry them on you in a flight suit pocket or in one of those small waist packs.

Even though it may seem as if I've given you everything you may ever need to know about emergency bailout procedures over this three part series, that is not at all true. This has been a very basic guideline and is in no way intended as a substitute for jump training, survival training or even in depth instruction from a qualified rigger. You may even want to make a parachute jump to see what it's like. I highly recommend a tandem jump. Remember this will not be a round parachute, but it will certainly help prepare you to better understand what a jump is all about. This could save you valuable time, if you ever have an emergency. Unless you have proper jump training and actual jumps on the rectangular parachutes a skydiver uses, a round parachute is much more docile and forgiving for your requirements. My goal has been to get your attitude geared toward looking at your parachute as a real option in the event of a major failure. I'm amazed at how many pilots tell me they have no intention of ever using their parachute. My reply, "I'll bet your attitude will change real quick if your spinning towards earth with only one wing or are on fire". And that



**YOUR SAFE RETURN TO EARTH (Cont'd...)**

is not the time to decide how to bailout. It's now when you are in total control. I hope none of you will ever need to use this information, but if you do, there is one last

important fact you must be aware of. After a successful bailout, it is customary to buy your rigger a bottle of the alcoholic beverage of his or her choice. Personally, I prefer a good bottle of wine. Please feel free to call or write me with any questions or parachute needs. Ask me about a safety seminar for your flying group. I'm here to serve and help you and look forward to hearing from you. I can be reached at (510) 785-7070, Monday-Friday 8am-4pm (PST). Or write me at Silver Parachute Sales & Service, P.O. Box 6092, Hayward, CA. 94540-6092. Blue Skies....



**BUILDER'S TIP:**

**How To Do the Empennage Fairing:**

*by Gil (epoxy ain't that bad) Alexander  
submitted by Don Wentz*

Question: I am in the process of fitting the fuselage/empennage fairing on my -6. Confirming what I have heard from many builders, it came as no surprise that it initially fits like s\*\*\*. Today I entertained the idea of pitching it totally, and glassing a new fairing from scratch. Is it worth the effort, or should I rework the one I've already got?

Answer: there is an easy way that works ....

1. Go out and buy WEST epoxy and 411 microballoons.
2. Use Vans part as a male mold to make new fairing with only ONE layer of 4 oz. cloth. Get some mold wax and PVA release agent and use them to ensure separation after curing.
3. Tape everything in sight at the fin/stab. area with a layer of vinyl tape. I used 3M #417 tape (also called 'glider tape' ...:^) Do not use masking tape ... this taped surface must be a release for epoxy. Do a good job here or you will find all sorts of empennage parts unintentionally bonded into a single assembly.....:^)
4. The molding you just made is VERY flexible and can now be taped in place at it's edges only (the edge 1/8 inch only) on the fin/stab junction. I used vinyl electrical tape a different color from the tape of step 3. It will hold it's curve well when the edges are held.
5. It probably won't fit well around the LE of the fin ... no big deal, just cut a notch in the molding so it fits. Every plane seems to be different in this area.

6. Lay up 2 layers of 9 oz. cloth (satin weave preferred) onto of your thin, taped-in-place molding with the WEST epoxy. Use separate pieces on each side and overlap an inch or two at the centerline. The floppy cloth should nicely bridge the notch you had to cut in step 5. Use a peel ply over the final wet lay-up and gently squeegee the excess resin into the peel ply ... I cut the peel ply into 3 to 4 inch wide strips since the peel ply won't conform well to curves.
7. Let cure completely. Leave it for 2 or 3 times longer than you would think ...:^)
8. Sand lightly .. you will usually need some sort of curved sanding block ... I made one from blue foam.
9. Any low spots found in the sanding step can be lightly filled with WEST epoxy and microballoons applied with a squeegee.
10. Sand again, sanding most of the filler off.
11. Repeat 9 and 10 until you are happy with the smoothness. I only needed two applications of filler. All sanding was done by hand, starting with 60 grit. I found the latex paint compatible sandpaper (the green stuff) from the hardware store to be the least likely to clog. When you are all done, there should only be patches of filler left, not a complete layer of filler.
12. Pull the tape off that is holding the edge of the original single layer molding down. A sideways motion works here since the tape edge is now laminated between the original 4 oz layer and the later two 9 oz layers.
13. Trim the edges of the part to final dimensions .. usually this should be just inside the tape location of step 4.
14. Remove all tape from step 3 that was providing a masking function.
15. Re-install fairing and drill for the #8 mounting screws.

This technique has been used on at least 4 local RV6s, and with the WEST epoxy will give a much more stable molding than the original kit one. It will also fit your plane EXACTLY. Other materials may work, but those listed above definitely work and are easy to use. It was clean enough with the WEST epoxy mini-pumps I found I could laminate a layer of cloth in my regular clothes without a mess.

... hope this helps ...



**THE TOOL EXCHANGE**

The club Toolmeister is Brent Ohlgren, 288-8197. Let him know if you have jigs, tools, shop space, etc. to loan, exchange, or otherwise provide -- at NO COST -- or if you are looking for something specific to borrow. And whether your item is listed here or not, go ahead and bring it to the meeting.

Home Wing Tools available: HVLP Paint Sprayer, Hole template for instrument panel, Wire crimping tool and die, Brake lining rivet set tool, and Tune-up and Annual Equipment (Compression check, Mag timing light, Timing dial, Mag adjustment tool, Plug gapper, high voltage cable tester, and Plug vibrator cleaner). Brent Ohlgren 288-8197.

Cutting wheel mandrel, custom made by Stan VanGrunsven to use for cutting your canopy. Knob on the outside makes it much easier to hold steady and not screw up that expensive piece of Plexiglas. WHO HAS THIS? Call Brent Ohlgren 288-8197.

PropTach (optical electronic tach, use to calibrate your tachometer). Butch Walters 360-636-2483.

Engine Stand. Don Wentz 503-696-7185.

Engine Hoist. Norm Rainey 360-256-6192.

Precision chemical scale, for measuring pro-seal. Brent Anderson 646-6380.

Surveyor's transit level -- handy way to level wing and fuselage jigs. Bill Kenny 590-8011.

Back Riveting Contraption -- large, counterweighted bucking bar and suspension system, and offset back rivet sets. (See "Back Riveting Wing Skins, December 1994 issue). Bob Neuner 771-6361.

Lead crucible with electric heating element for melting lead for the elevator counterweights. Doug Stenger 324-6993.

Table saw taper jig, for tapering wing spar flange strips. Carl Weston 649-8830.



**WANTED**      *Ads are FREE*

Leftover ProSeal. Skip Dennis. 503-655-7226. 2/98

Interested in finding a good flying RV-6A. Ola Vestad. viking@wolfenet.com 2/98

Looking for an engine for an RV-8 that's in progress. Any ideas? Bryan Stauter oasis@oio.net 1/98



**FOR SALE / RENT** Ads are FREE.

New Leather seats for an RV-6A. Grey with vertical red center strip. Paid \$750, will sell for \$500. Robert Hoyt 503-639-1953. 3/98

RV-4 kit, tail an wings finished. Superb quality by A&P, \$8000. Additional parts available. (503) 648-1819 or (503) 628-2006. 2/98

Completed empennage kit. Excellent workmanship. \$800 obo. Greg Halverson. 503-591-0105. 2/98

FYI - Dave & Helen Patchett found a place in Arizona to buy really nice whole cow hides for doing upholstery. They measure 6' x 8', inside cut, several colors. \$110 per hide. Dave 541-473-2785 for more info. 2/98

Narco LRN-840 Loran. Works perfectly, includes tray, antenna, manual. Cheap navigation, only \$200. Randy Lervold, 360-944-3702 1/98

Van's Air Force Apparel, Home Wing member discount. Limited edition VAF hats, gray crown with black bill. Four color 100% embroidered jacket patches. Van's Air Force jackets, MA-1 style black w/red liner, VAF patches on shoulder and breast, pencil pocket, optional name patch. Randall Henderson (503) 297-5045, or catch me at a meeting.

Duckworks Landing Lights. Retro-fittable, light, easy installation. Kits start at \$69 (discount for Ptl'd RVators). Don Wentz 503-696-7185.



**“Home Wing” Newsletter Subscription/Renewal**

Please fill out and mail to Randy Lervold; 5228 NW 14th Circle; Camas, WA 98607; along with \$10 for renewals or new subscriptions. Please make checks payable to Randy Lervold. If you are renewing, you only need to give your name, date, payment method, and any other information that has changed. Use this form for address changes too.

Name \_\_\_\_\_ Spouse's Name \_\_\_\_\_

Address \_\_\_\_\_ Home Phone \_\_\_\_\_

City, State, Zip \_\_\_\_\_ Work Phone \_\_\_\_\_

Pmt (\$10/yr) Check  Cash  Info change only  E-mail Address \_\_\_\_\_

Project (RV-3, 4, 6, 6A, 8) \_\_\_\_\_ Comments?

Progress:

Tail In Progress  Finished

Wings In Progress  Finished

Fuselage In Progress  Finished

Finish In Progress  Finished (i.e. flying)