

HOME WING



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



Stan Vangrunsvan claws his way into the sky for an evening flight during the '99 Homecoming.

Editor's Hangar

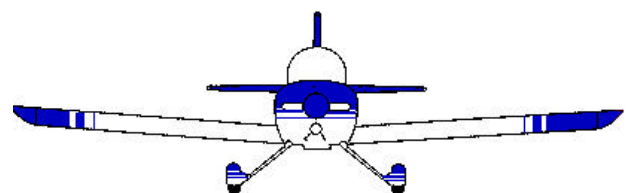
I'll spare you the all the millennium rhetoric here, we've all had enough of that. Call me a bit of a non-believer, but I never did buy into all the Y2K panic. I'm sitting here on New Year's Day writing this and everything is working just fine. Gee, what a surprise (not!).

I will at least welcome you to the new year. We have all sorts of things to look forward to in the world of RVs; lots of building time this winter for us builders, lots of maintenance/improvement time for you flyers, the Home Wing fly-in in June, all the EAA events (Sun-N-Fun, Arlington, AirVenture, etc.), the Van's Homecoming at the new location in Aurora, and hopefully many more first flights of Home Wingers (maybe including mine!).

Remember, it's a new year — time to resolve to make that improvement on your plane or to finish that major phase of your construction, and most importantly *to write about it!*

Keep those articles and pictures coming!

...Randy





Meeting coordinator:
Randall Henderson
503-297-5045
randallh@home.com

MONTHLY MEETING:

(2nd Thursday every month, various locations, 7:00 pm)

Place: Craig Roberts' paint shop
Aurora Airport (UAO).

Date: Thursday, January 13, 2000

Time: 7:00 pm

The January meeting will be at Craig Roberts' paint shop at Aurora. Bob White's airplane should be there, paint job completed or nearly so, and Randall expects to have his there as well, in the prep stage.

From Portland:

Take I-5 South, take the Canby/Hubbard exit, turn left at the intersection (Arndt Road), then turn right (south) on Airport Road. Turn right at the new white hangars near the north end -- the turn is unmarked, and is the next one after General Aviation Services. The hangar is #8, adjacent to the taxiway. Park in front of or to the west of the hangar, but NOT in front of anyone else's hangar! And please don't block the taxiway. Also be sure to watch for, and give way to, any planes taxiing.



From the Air:

The identifier is UAO. The paint shop is in the new white hangars at the north end of the field. Take the next to the last turnoff from the taxiway at the north end. Be sure to follow the published noise abatement procedures.

Tentative future meeting schedule:

February: t.b.d.
March: t.b.d.
April: t.b.d.

Meeting places are always needed; if you'd be interested in hosting a meeting please contact Randall Henderson at 503-297-5045 or randallh@home.com

EAA CHAPTER 105 Pancake Breakfast:
First Saturday of every month at Twin Oaks Airpark, 8:00 am, \$4.00 (always lot's of RVs to look at too!)

This month: 1/1/2000

EAA CHAPTER 105 Monthly Meeting:

Third Thursday of every month at the EAA 105 hangar/clubhouse, Twin Oaks Airpark, 7:00 pm

This month: 1/20/2000

EAA CHAPTER 902 Monthly Meeting:

Second Wednesday of every month at the Mulino Airport in the OPA building. For info call Gary Sparks at 503-251-0843

This month: 1/12/2000

REMINDER— SEMINAR NOTICE



Cost: \$150
When: Jan. 15
& 16, 2000
Where: Hobby Field, Creswell Oregon
Contact: Ross Mickey
541-345-8400
rmickey@ix.netcom.com

Send your name, address, phone & \$50 deposit to:
AeroElectric Seminar
P.O. Box 5122
Eugene, OR 97405

For further information call Ross Mickey or go to www.aeroelectric.com.



April 9th-15th, 2000
www.sun-n-fun.org
941-644-2431

December Meeting Recap

Thanks very much to our host for the December meeting... Engine Components Northwest at TTD. I'm sure everyone enjoyed seeing just how our cases, cranks, and heads are rebuilt... there's a lot to it!



Top left; our host welcomes us to where it all starts. Top right; jugs everywhere! Bottom left; a crank after going through the dye penetrant process for crack inspection. Those purple marks are cracks that will each be fixed in the next step of the process. Bottom right; a crank bearing journal after the same process. The purple marks on the bearing face are metal fretting, probably from an improperly torqued bolt.



What I Did on my Christmas Vacation

by Randy Henderson
Age Four (ty-two)

On my christmas vacation we went down to the beach. Our relatives live there so we like to go there a lot. Everyone else drove but I didn't cause I got my airplane before that. I dont always get to fly down there because sometimes the weather is bad but this time it was real nice so I flew there and landed and then everyone came out and wanted to fly too. So they did but I flew every time too cause I am the only one that gets to fly the plane, except when I let someone else for just a little bit.

Then the next day I had some presents to get so I went in the plane back to where I live and got them and also went to see another guy who is going to paint my plane at a another airport. He's a nice guy and he paints planes really cool but he said if I dont give him all my money he wont do it. I want the plane to be really cool but I also want to keep the money. Anyway I didnt have to give it to him then so I went back

to the beach. It was the day when the moon was really bright and it was night when I got back so I went in circles until the moon came up and then went towards it and went upside down lots of times. It was really fun cause the moon was right behind this big mountain and I was pointed right at it and there were stars and I was upside down then right side up then upside down again and it looked like the mountain and the moon was doing that instead of me in the plane.

Then it was Christmas day and we all opened presents. I didn't care if I got any presents cause I already had my plane but I got a cool watch anyway. Then

I wanted to see my sister who lives in Eugene which is another city that takes a long time to drive to but I took my plane and went and saw her and it didnt take very long. I couldnt stay there very long because I had to go back to the beach but I didnt care because it was fun to



The author.

just go in the plane and come back. When I came back it was starting to get dark and there was lots of pretty lights all the way up and down the beach. I went upside down some more while I did that. I cant go upside down for a long time because the plane wont work right if I do that but I can go upside down then right side up right away and its okay and also really fun. Some people have to throw up when you do that but I like it and dont have to throw up at all.

Then the next day there were some more people who wanted to fly so I flew with them some more and they really liked it. Theres this big river there and the ocean and some mountains and we went over all of that. Then the next day I had to come back and I was sad but I really wasnt because I got to fly some more and I

got up really early so I could start to come back before it was light yet. And the sun came up when I was coming back and it was really bright in my eyes but really cool too. Theres this guy in a tower at the airport and you're supposed to say on the radio when youre going to land and I did that but then I said I didnt want to yet because it was so cool and he said okay. So I flew around some more and then I landed.

It was the best Christmas vacation ever.

;-)

The Paint Story

By Kevin Lane

Yes, it's yet another aircraft painting horror story. Come to think of it, has anyone heard of a good experience?

Jim was getting his RV-4 painted after 15 years of construction. He started so long ago that he was into his plane all of \$12K, flying. He wasn't about to spend any real money on getting it painted. Horizon Airlines donated primer and paint, quite generously, 8 gallons. Turns out Jim was as generous and offered to give me the leftovers, 3 gallons of Desathane, Horizon white. Since I had decided to color my plane with vinyl graphics this sounded like a great opportunity.

Brian and I had been back and forth about painting our planes ourselves vs. paying to have it done. It really isn't legal to paint in a Port of Portland owned hangar, but then working on your plane isn't technically legal either. We threw out ideas of a plastic paint booth and exhaust fans that fit between the slightly open hangar doors, and painting at night or early morning. I had painted my work truck in my garage and knew how difficult it is to get a decent finish. We discussed taking the planes apart and painting them in an auto body shop. We remembered the 12 hours we spent just installing wing spar bolts (Van's last laugh, the -6A gear leg sockets).

Jim told us about Steve Smith in Kelso. He was simply charging shop time at \$35/hr. When I saw Jim's -4 with new three-color paint job I had to admit it looked real nice and couldn't believe it cost less than \$1,000. Even Jim will admit that his sheet metal work is rugged. But with Steve doing a bit of body work you would never have guessed. The next problem was scheduling when to take the plane up there. Steve fits the RV's in between his real jobs, so Jim's plane was up there several months. I had a wedding anniversary on attend on Labor Day in Ohio, I couldn't miss the Reno time trials, (and new traditions!), a trip to LA (my first SVFR), and then the weather became so uncharacteristically beautiful in September/October. It seemed stupid to ground the plane.

Brian flew up with me in late October when I dropped off N3773 in Kelso. I dreaded pulling all

those bolts with the ever-so-carefully inserted shim washers. We pulled the ailerons, flaps, elevators, rudder, wheel pants, intersection fairings, emp fairing, inspection plates, drilled off the reg plate (found corrosion starting), and, of course, the cowlings, spinner, wing tip lens, rudder tip, antennas..... you get the idea, it takes a day.

To etch and alodine takes but an hour when you use a garden sprayer. Steve's hangar has special drains and settling tanks that collect all the chemicals. He's going to get a recycler system that reclaims his paint thinners. The next few days involved redoing the V-stab body work I wasn't happy with along with my all aluminum emp. fairing. I had done a lot of work before flying to Kelso. It is so much more pleasant working in a hangar with plenty of lights, a furnace, and mostly lots of space to walk around. Steve was teaching me how to do body work the right way. It takes the right air sander, a bunch of chemicals, and lots of sandpaper, which, by the way, costs only 23 cents a disk when you buy 100 (I've paid \$1.29/ea at Tool Peddler). I was enjoying working up there and the drive to Kelso didn't seem that long at this point.

Next came the taping off of everything that doesn't get painted. That's when I realized my rudder was missing. "well, I remember putting it down in the grass outside so it wouldn't get scratched by the blacktop" Yup, that's where it was, been there two days. Good thing not too much goes on at Kelso International!

So next I learned how to use one of those paper stands that puts the tape on the edge as you pull it out. Beats the heck out of newspaper. Taping the canopy, which has to be removed, is a 3-D puzzle, as well as taping over the hole it left. Besides easily-taped things like the strobes and engine, you discover holes, aileron crank inspection hole, flap linkage hole, emp. fairing hole, that need a little elf to tape off from the inside. The taping details seem to never end, antenna sockets, tail tie down, fuel diaphragm overflow tube, brake calipers, propeller. I had decided to do as much of the prep work as I could. I was learning a lot just being around the shop and I have never been shy about asking questions.

Desathane requires its own primer which is a dark green. Steve shot a primer/sealer on the fiber-

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glass followed by the Desathane primer. When he shot the white finish coat everything looked fine. An hour later all the rivets were showing little rings of green, as well as most of the sheet metal edges. Steve shot some more paint, sometimes that's all it takes. Brian flew me up on a Saturday to help reassemble my plane and possibly fly it home. We both looked at it without saying anything. The green circles were back. "You know, if you had shot that in Imron and used a white primer, none of that would show," Steve said. "Must be some silicon on the metal or something. I shot it twice and it still didn't go away. Shot 2 ½ gallons" Make me cry, Steve. Looks like hell and now weighs a ton besides. Funny thing, if I can use that phrase, was that the under sides of the wings and the belly looked beautiful, just like glass. So did all the fiberglass parts. Free paint, right, I'm such a sucker.

So my options were to strip it and start over, or sand off the finish coat, cover the rivets with a sander/primer, and reshoot the finish coat. I had used all the free paint up at this point. Steve buys Desathane from Boeing Surplus for \$25/gallon that is a year old. Boeing sells it after one year despite a shelf life of three. He said it was the exact same paint. Desathane becomes incredibly hard after five days of curing. Brian and I started sanding. We spent four hours Saturday. I spent eight hours on Sunday and Monday, and a half a day Tuesday. I could tell it was getting harder. I was using a 180 grit sanding disk every five minutes. In a couple spots the paint was so thick you couldn't see the rivets. I sprayed sander/primer on all the rivets and edges and hit that with 180 grit, then the whole plane, except the belly and undersides of the wings, with 320.

When you repaint you have to paint until you hit a seam. You can't blend in a new coat or spot. That means the leading edge gets sanded back to the wing spar underneath. Not fun sanding over your face. Steve told me that with Imron you can paint a second coat without sanding the prior coat. This makes a huge difference in multi-color stripes and numbers.

Steve shot another coat of Desathane. It worked, no circles. A fair amount of dirt however. Steve has huge fans and filters. He air blasts the

plane first, tack cloths and paint cleaner with special "virgin" rags, hoses down the floor, runs the fans for twenty minutes before painting. A problem with Desathane is that it can take up to two hours to reach the tack-free stage. He said that while my plane was drying the wind direction changed at Kelso, which can add a lot of dirt to the air. Some of this dirt can be buffed out. One of the side fuse panels had some noticeable sags. So I prepped it and Steve re-shot that. It was old hat now.

Time to call it done. I felt like an employee at this point. I'd eaten lunch at Steve's house, met his father, his father-in-law, all his children, taken his labrador for a car ride, and yes, been offered a job, seriously, \$35K/yr. (I only work this hard on MY plane)

While I was sanding Steve and an employee were stripping a six passenger Bonanza, the one that had it's wing explode on take-off at PDX recently. I realize now that I could have stripped my plane in ¼ the time it took to sand. It just seemed like such a gross thing to do. With the new chemicals however it is simply spray on, set overnight, wash the paint off. Most of the paint is on the floor in the morning. You don't have to wear a respirator, it doesn't burn your skin and is the color of Bazooka bubble gum.

So, for some good news, which I needed by now. I owed Steve \$450. I must have used half that in masking tape, the good 3M stuff. Another half in sandpaper, and another half in lacquer thinner and rags. Jim has a good theory as to what went wrong. Turns out Imron and Desathane are like oil and water. After my plane was alodined it set in the corner of the big hangar. Steve shot Imron on another plane and some overspray got on mine or was already in the tarps we covered it with.. Went he tack ragged it the overspray collected in the rivet dimples and sheet edges. That would explain why just the top and sides were affected and none of the fiberglass. Steve's father used to paint out at Troutdale for decades and owned Western Propeller at one time. Steve has painted a lot of planes, even a Citation V. He paints Galvin Flying Service's 172s every year to match the new Cessna paint schemes! When something goes wrong he doesn't start making excuses. There are so many variables which are

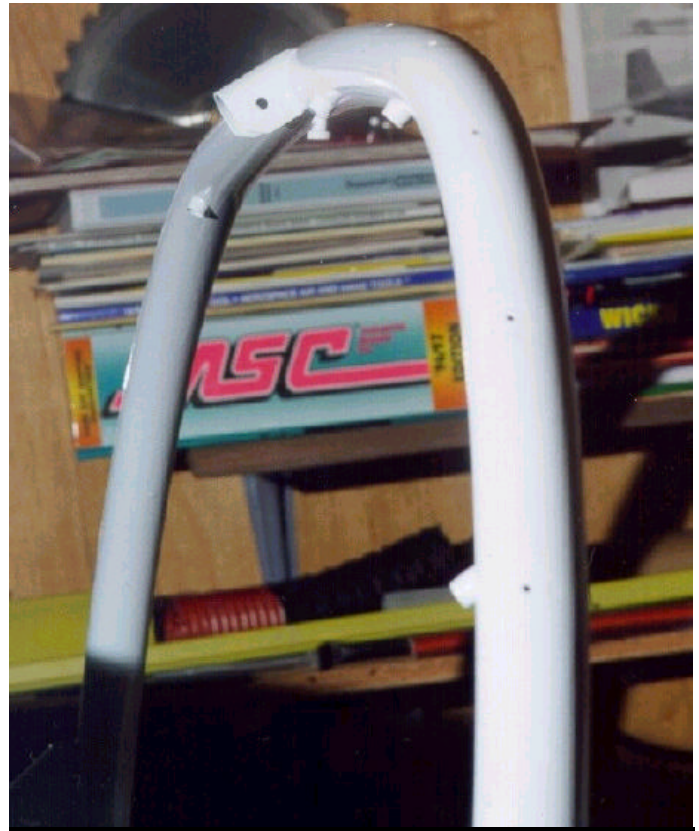
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so hard or impossible to control. With hindsight I can see now that the Desathane was not a good choice. Steve gets Imron I believe he said less than \$60/gal. The Desathane is incredibly hard. I'm sure there are good reasons the airlines use it. That special Desathane primer alone is worth several hundred dollars.

So how much paint got applied? I never got a chance to weigh my plane right before painting. It weighed 1,027 lbs on its maiden flight two years ago. Since then there has been strobes, nav lights, heat muffs, an ELT, an interior, closed plenum baffling, 4 cyl. CHT/EGT probes and gauge, auto-pilot, Rose ignition, and a light-weight starter added. Now N3773 weighs in at 1082 lbs. So how much? Thirty five pounds? Forty? Hope this trend is at its end. Wait until you see my next plane. Then I'll get it all right! Meanwhile I think I might go whale watching in Baja in February. "sorry dear, we can only carry 44 lbs. of luggage no w"

...Kevin



Randall's roll bar lighting system.

Complete Panel Lighting System For \$12.77

by Randall Henderson

A couple of months ago I wrote an article detailing how I had nice pretty lettering silk screened onto my instrument panel. I know the more thrifty among you were probably shaking their heads in disgust over someone spending that much time and money, when a Dymo label maker will do just fine. Perhaps I can redeem myself in their eyes by describing how I spent only \$12.77 for a complete instrument panel lighting system.

I wanted some sort of panel lighting for night operations, but at \$120 extra a pop, I wasn't about to buy the internal lighting option for the gyro instruments. I also ended up with a used altimeter and VSI, neither of which were internally lighted, so it didn't make much sense to get internally lighted airspeed, turn coordinator, tach or MP, since I was already going to be stuck with some sort of supplemental lighting arrangement anyway.

I looked at the alternatives — post lights for \$24.00 ea (x 6 = \$192), wedge lights at \$40 ea (x 6 = \$240), fiber optic systems starting at \$250 +.... OUCH. I figured there had to be a less expensive (and simpler) way.

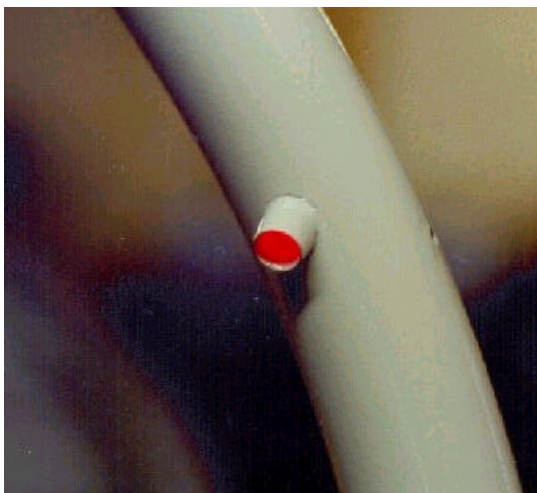
I did consider using the little eyeball lights that Vans sells, and actually bought a couple to try out. I know they can be made to work since I've seen them used in several other RVs, but I just couldn't come up with a configuration that worked well for me. I also got an LCD Maplite, which does a good job as a map light but again, couldn't make it work for panel flood lighting to my satisfaction.

But the above devices gave me an idea — they both use bright LEDs, which are small, inexpensive, reliable, and low-current, and there are several sizes and mounting options readily available. So I motored on down to Radio Shack, and after some experimentation, ended up with four red 800 mcd wide angle LEDs in little metal hooded housings (part nos. 276-309 and 276-080A respectively), mounted in holes drilled in the front of the roll bar (RV-6 slider), and strategically aimed at the panel. (They also had plastic snap-in bushings which would have been easier to use, but the metal ones have a hood which keeps them from shining in your eyes and minimizes reflection off the windscreen.)

Power wires go down inside the roll bar and through a hole at the bottom, thence to resistors, a Zener diode, and a dimmer behind the panel. The LEDs were \$1.39 ea, the hoods another \$1.19 for a package of two. Five 1/2 watt 400 ohm resistors at \$.025 ea (to reduce the

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Closeup of one of the LEDs attached to

voltage to the LEDs), and a 5v Zener diode for \$1.00 (to reduce the voltage further and modify the dimming curve since my dimmer is calibrated for incandescent

lights), brought it up to a grand total of \$12.77! Of course this doesn't include the price of the dimmer, wire, and ring terminals, but those would be a part of any panel lighting system.

I originally planned to tap the holes in the roll bar for the threads in the LED housings but couldn't find the correct tap for the oddball threads they use. Plus I discovered that I had to aim the things carefully and not normal to the roll bar — difficult to do with tapped holes. So I just drilled 3/8" holes and used JB weld to hold the housings in place. Of course the one big drawback from doing this is that it makes it kind of tough to get them out if I ever have to, but those LEDs are pretty reliable so I'm just hoping I never have to replace any of them.

LEDs were sourced from Radio shack. I'm not too fond of them and that whole Big Brother "Give me your NAME!" thing they have going, but I have to admit they have the best variety of LEDs and LED holders. I got the resistors and Zener diode at Norvak Electronics.

If you want to try something similar but don't have any electronics background, don't be discouraged by all this resistance/voltage stuff. I know very little about it myself, but with the help of a basic electronics book (mostly to remember what Ohms law is) and a friendly EE I called on, I was able to work it out, and if I can do it, anybody can.

And how does it work? Pretty darned well! I do have some minor shadowing at the top of a couple of instruments, but that's my only complaint, and it's still much better than the standard Cessna set-up.

...Randall

RV-8 Baggage Compartment Options

By Mike Robbins

RV-8QB Home Winger Mike Robbins, who lives in Issaquah, wanted to make sure he could carry his folding bicycles in his new RV-8. Following is the story of how he modified his rear baggage compartment to create a greater storage space.

...ed

Modified Aft Baggage Compartment

For many years I have wanted a low wing, all metal tandem airplane. I learned to fly in a tandem 39 years ago, although it wasn't a low wing nor made of metal. Since I couldn't afford to buy a new one, if one existed, I knew I would have to make one. But I also knew that time would be in short supply. Another desire was to have a baggage compartment with enough room to put a couple of bikes in it. I looked at the RV-4 years ago, but it was just too small. I considered the 6, which has a fairly roomy baggage compartment, but at the time I knew I couldn't finish one, and of course it wasn't tandem. But when the 8 came out I knew I had to have one. Trouble was, the baggage compartment, as currently designed, still wouldn't accommodate my desired cargo. I really wanted the 8, and I knew I could finish one if I had the QB, so I decided to redesign the aft cargo compartment to meet my needs.

I am going with the O-360 A1A, so can put the battery up front, either on the firewall, or behind it as Randy Lervold is doing. That way I could eliminate that step in the baggage compartment which would just be wasted space.

I started by designing full length side panels which will be pop riveted on the top and have nut plates on the bottom flange. The full length floor is secured to the side panels and the F-818 baggage rib by #6 screws. So the entire floor is removable. To get the right dimensions I made templates out of 1/8" rigid foam boards that are carried in the art department of most stationary stores. I just kept cutting them down until I got the correct shape. I wanted a fairly robust cover to protect the elevator bellcrank and push-pull tube. I friend of mine, and fellow RV builder Larry James of Bellevue, WA, had some .063 5052 sheet. He suggested a design for the cover. I made a mockup of the cover again using the foam boards, and had the cover welded. Looks neater that way. The cover is secured to the floor, F-818 baggage rib, and aft bulkhead with #8 screws. I made the aft

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bulkhead so it fits on the back side of the F-808 bulkhead and is secured with #8 screws. I made a cutout in the bulkhead so I could put long things in the back, like X-C skis or maybe a shotgun if I ever go up to Alaska. There are also some stiffeners on the back side of it. All the parts, except the cover, are made of .032 instead of .025. I felt the .025 is a little flimsy for this application.

After putting all the finished parts in I made a trial fit check of one of my Bike Friday folding bikes. It *just barely fit* with about an 1/8" clearance. It's really tight, but I met my objective.

Although the parts look rather simple, it took me about two months to design and make that modification. But it was worth it to me.

Strobe Power Supply and ELT Bracket

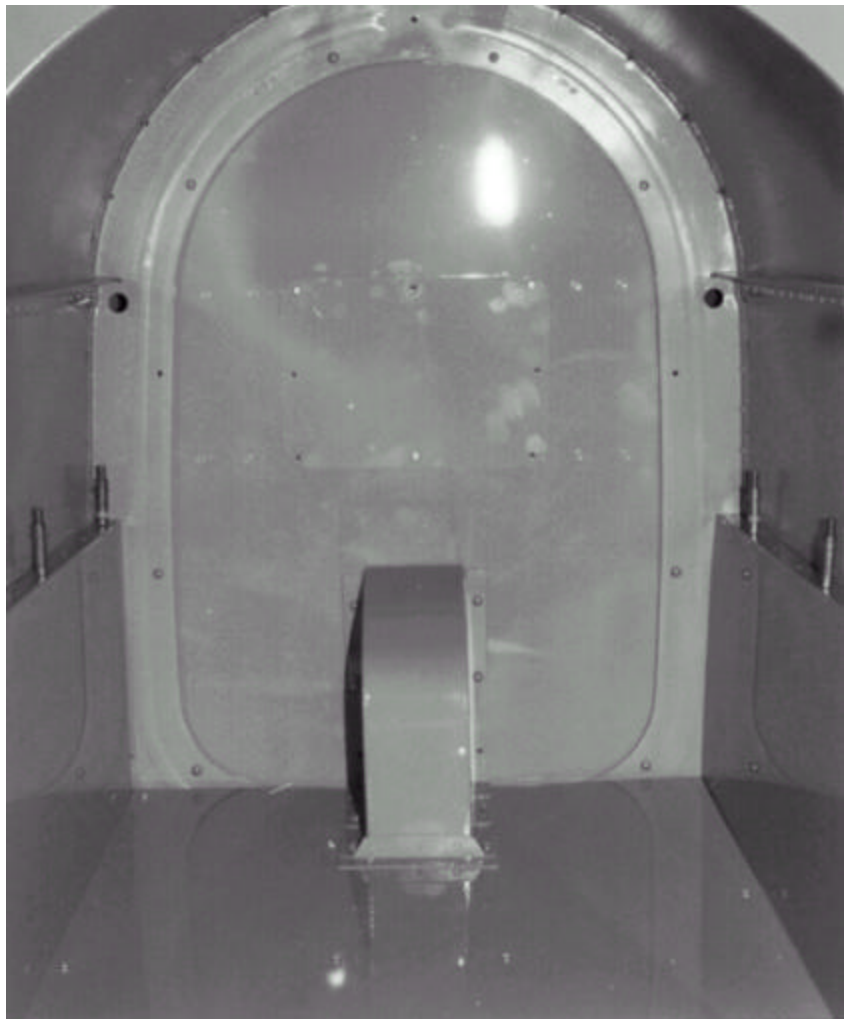
I also wanted a strong foundation for my strobe power supply and ACK ELT, and I didn't want to mount them in the aft cargo compartment. So I designed brackets for them that are riveted to stringers mounted on the floor behind the F-808 aft baggage compartment bulkhead.

The stringers are made from $\frac{3}{4}$ x $\frac{3}{4}$.063 angle, and are secured both to the fuselage floor with AN426AD3 rivets and tied to the bulkheads at each end with angle brackets and rivets (AN470AD3s). I had to use a pop rivet dimpler to dimple the holes in the fuselage bottom. I am using the same Whelen power supply and ELT that is in my Kitfox, so I was able to get the dimensions of the mounting holes and carefully duplicated them in the brackets that I riveted to the .063 stringers. I put #10 nutplates in the mounting brackets. I made the eight mounting brackets and the four stabilizing brackets from $\frac{3}{4}$ x 2 .063 angle that I got from Boeing surplus.

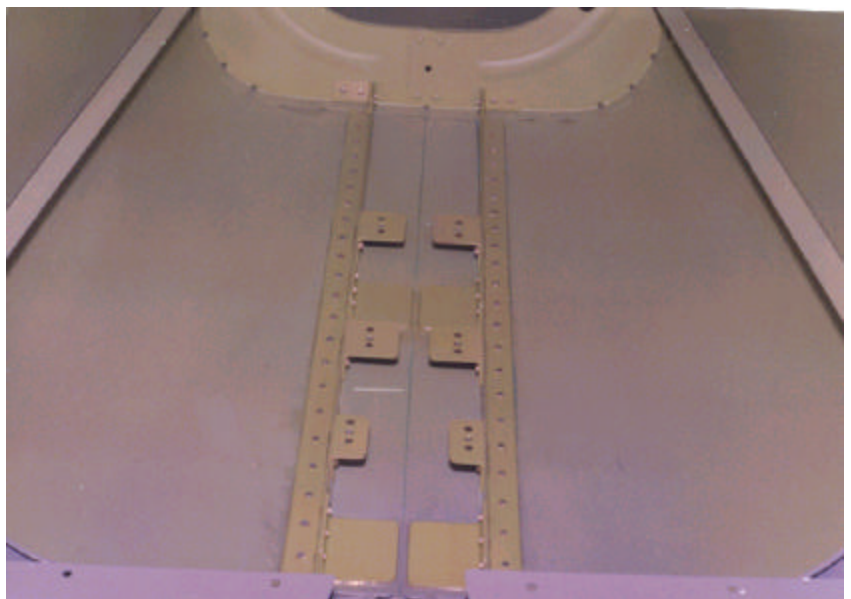
It adds a little weight back there, but I figure with a wife that weighs only 100 lbs. (that she will admit to anyway) and my battery forward I should be OK CG wise.

Credit must be given to Larry James without whose help this project would never have come to pass.

...Mike



RV-8ers will notice the absence of the baggage step and the increased room featured by Mike's modification.



Looking aft between the F-808 and F-809 bulkheads.

Take Five... for safety

178 seconds

Randy,

In the interest of keeping everyone safe I offer this article. I gave it to all my "private" students prior to completing their ratings. I'll let the article speak for itself. I do not remember who the author was, but I believe it came from an FAA handout. I don't think it would be a problem re-printing it.

Food for thought!

*...Scott Chambers
RV-8, empennage*

If you're ever tempted to take off in marginal weather and have no instrument training, read this article first before you go. If you decide to go anyway and lose visual contact, start counting down from 178 seconds.

How long can a pilot who has no instrument training expect to live after he flies into bad weather and loses visual contact? Researchers at the University of Illinois found the answer to this question. Twenty students "guinea pigs" flew into simulated instrument weather, and all went into graveyard spirals or rollercoasters. The outcome differed in only one respect: the time required till control was lost. The interval ranged from 480 seconds to 20 seconds. The average time was 178 seconds - two seconds short of three minutes.

Here's the fatal scenario...

The sky is overcast and the visibility poor. That reported 5-mile visibility looks more like two, and you can't judge the height of the overcast. Your altimeter says you're at 1500 but your map tells you there's local terrain as high as 1200 feet. There might even be a tower nearby because you're not sure just how far off course you are. But you've flown into worse weather than this, so you press on.

You find yourself unconsciously easing back just a bit on the controls to clear those none-too-imaginary towers. With no warning you're in the soup.

You now have 178 seconds to live. Your aircraft feels on an even keel but your compass turns slowly. You push a little rudder and add a little pressure on the controls to stop the turn but this feels unnatural and you return the controls to their original position. This feels better but your airspeed is increasing slightly. You scan your instrument panel for help but what you see looks somewhat unfamiliar. You're sure this is just a bad spot. You'll break out in a few minutes. (But you don't have several minutes left...)

You now have 100 seconds to live. You glance at your altimeter and are shocked to see it unwinding. You're already down to 1,200 feet. Instinctively, you pull back on the controls but the altimeter still unwinds. The engine is into the red - and the airspeed, nearly so.

You have 45 seconds to live. Now you're sweating and shaking. There must be something wrong with the controls; pulling back only moves that airspeed indicator further into the red. You can hear the wind tearing at the aircraft.

You have 10 seconds to live. Suddenly, you see the ground. The trees rush up at you. You can see the horizon if you turn your head far enough but it's at an unusual angle - you're almost inverted. You open your mouth to scream but...

...you have no seconds left.

*...Scott Chambers
RV-8, empennage*

Proseal Relief

Many of you know that Evan Johnson has taken over Don London's (Aviacomp) tank building business. Following is a note from Evan...

Just a quick announcement. Some of you are already aware that I have moved shop from Portland to Redding, CA. but to the others, this is how you find me. Due to increasing demand, I have decided to try building fuel tanks as a full time job. As always, I am looking for new projects, and any of you who would like to skip the task of dealing with the Proseal are encouraged to call. Also remember that advise is always free. If you are building your own tanks and get stuck (maybe literally) feel free to call.....I'll help if I can.

Much Thanks ..Evan

Evan Johnson
1736 Garden Ave.
Redding CA 96001
(530) 945-9308
evmeg@snowcrest.net

Preflights

By Kevin Lane

Sunday I flew up to Hoquiam, WA to see a friend and the Lady Washington under stern repair. I started the routine preflight checks when I noticed the stick didn't move left enough. I repeated the right/left/right, left/right/left and it didn't seem quite as bad.

It was a nice day, I had no schedule so I dug out a screw driver and removed the seat pans and wing inspection covers. Movement was definitely restricted but I seemed to have a good 80%. I swore it seemed like 50% the first time. I disconnected the autopilot control link (Leatherman to the rescue again!) and flew home.


Today when I started tearing into it again I discovered the remains of a drilled out pop rivet wedged in the outer aileron hinge. It was just the portion that deforms, about the size of a BB. At one time I had riveted a trim tab on the wingtip. I never finished removing the trapped portion of the rivets when I removed the tab and put it on the aileron. That piece of rivet had bounced out of the wingtip, there's a tiny hole on the inside trailing edge, across a good 1/4" gap and then was caught in the

aileron. My first movements slowly started to crush the rivet explaining the increasing movement as I attempted to debug what was wrong.

The guy who taught me to fly, Steve, had learned "the Navy way" and insisted we do the procedure identically each time, pointing your thumb towards the aileron which is supposed to go up (works better with a yoke). When I started flying the RV, the "mechanic may have switched the cables accidentally" didn't make a whole lot of sense anymore. Making sure you have movement clear to the stops does though, and my "stirring the pot" didn't go over well when I gave Steve his first RV ride. It is easy not to push the stick all the way since your leg restricts it's last bit of movement. I'll bet I could win the lottery before I could bounce a rivet head and catch it with the aileron hinge.

...Kevin (2nd annual time, and I don't need new tires again!)

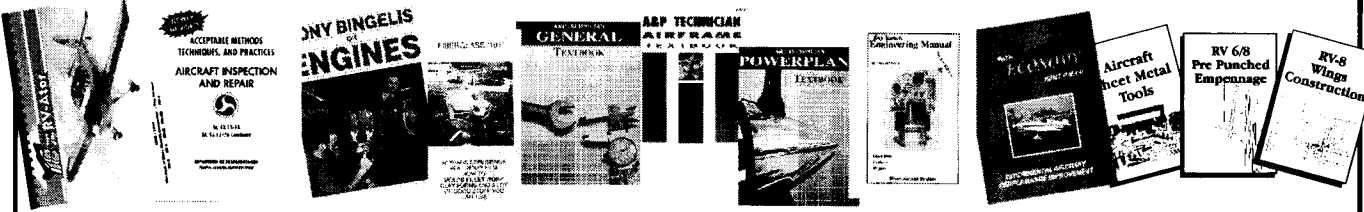
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Classifieds are free to Home Wing members. Ads will run for three months. Send to editor by e-mail or mail. Renewals ok, just let editor know. Date at end of the ad is last month ad scheduled to run.

FOR SALE

RV-4 Lycoming O-320B2B 160HP, 1,070 TT/SMOH, Pacesetter 68" wood prop, II Morrow Apollo 704 Digital Com, side mounted and hard wired Garmin 90 GPS. \$38,950 Firm. Call (503) 807-9805 for additional details. 1/1/00

RV-3 - Basic day VFR with KX99 wired for headset operation, Terra xpndr and encoder, and Garmin 95 XL, all running on 12 volt system. O-320, Pacesetter prop. 375 SMOH and TTAf, \$14,750. Contact Jack Pierson, 503-628-0215, 3/1/00

WANT TO TRADE? I have a beautiful 1968 Corvette T-top coupe that I want to swap for anything close to or equal in value - \$15,000. 300hp with Black Cherry custom paint. Any aircraft or kit considered. Jim Headrick (503)630-2050 RV6A N160JH s/n 25250 3/00

Wing & Empennage rack — Storage rack for wing and empennage parts on casters, \$40. Contact Greg Halverson 503-591-0105 12/99

ATS Rivet Gun — New \$150, sell \$75. Brent Ohlgren 503-288-8197 or obrento@mail.aracnet.com

Avionics - All from Cessna 182, removed for upgrades:

- KR-86 ADF W/ KA44B Combined loop-sense antenna, \$1450.00
 - KN-64 DME with tray and cables \$1,650.00
 - Michel TKM MX-170B with Tray, Cables, KI 201C indicator (Radio is 1 3/4 years old) \$1,250.00
- Jay Phillips 503-640-0355, jphill5919@aol.com 3/00

Duckworks Landing Light Kit - \$55.00 Contact Brent Anderson 503 598 6132 Days 503-646-6380 Eves brenta@pcez.com, 12/99

Hanger Available for winter — Chehalem (17S) Contact Rod Kimmell 503 985-0606, 1/1/00

Duckworks Landing Lights - Retro-fittable, light, easy installation. Kits start at \$69, discount for Home Wing-ers. Don Wentz, 503-696-7185

BuildersBookstore - Books and videos specifically for the RV builder and pilot. Call or write for a FREE catalog; (970) 887-2207, PO Box 270, Tabernash, CO 80478. Or see our web page at www.buildersbooks.com
Featured item: 18 YEARS OF THE RV-ATOR is now

available. New additions all the time!

BACK ISSUES are available at \$2.00 each including postage for hardcopy. Limited availability, contact newsletter editor. Adobe Acrobat versions free to members.

WANTED

RV-4 Advice — Seeking RV-4 help and guidance. Mid-fuselage stage on RV-4 project. If anyone wants to take the time to come down to Klamath Falls to look over my shoulder and give me a little guidance on my -4, I'd be willing to buy their fuel and breakfast or lunch. E-mail or call Jim Baker, bakerje@kfalls.net or (541) 884-5900 work, (541) 883-5701 home. 1/00

WANTED - Top half of the old style cowling. Slightly damaged is fine. Prefer longer fixed pitch style. Looking mainly for the top, but would be interested in a matching set if the price is right. Charlie. 360 577-6407 or e-mail: searose@kalama.com 2/00

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Mail subscribers: Your renewal date is in the upper right corner of your mailing label. Use the form at the back of this newsletter if there are any changes, otherwise just mail a check to the editor, or pay at a meeting.

E-mail subscribers: Look for your name and renewal date in the e-mail that the newsletter is attached to.

All subscription data is tracked in an Access database. Data entry errors can happen - if you find an error in your renewal date please contact the editor.

Use 'em!

Members are encouraged to take advantage of the classified section. Since it's free why not take a stab at unloading that unused airplane stuff. Besides, it's kind of interesting to look at all the odds 'n ends for sale.

Please note that the date at the end of each ad is the expiration date. They run for three months and then are dropped unless you want them renewed by notifying me.

...Randy

The Tool Exchange

The Home Wing owns a selection of tools for use by its members. The Toolmeister is **Brent Ohlgren, 503-288-8197**. Call either Brent to arrange use.

Remember:

- All use must go through Brent.
- You are personally (financially) responsible for any damage.

Home Wing Tools
HVLP paint sprayer
Hole template for instrument panel
Wire crimping tool & die
Brake lining rivet set
Tune-up & annual kit (compression checker, mag timing light, timing dial, mag adjustment tool, plug gapper, high voltage cable tester, and plug vibrator cleaner.
Aircraft scales — allows you to accurately weigh your beast and also determine CG.
Oil filter cutter—custom make by Stan V.

Other benevolent members also have tools they may be willing to loan. Let the editor 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.

Item	Owner/lender	Phone / e-mail
Custom cutting wheel mandrel (for cutting your canopy)	Stan VanGrunsven	
Prop tach (calibrate your tach)	Butch Walters	360-636-2483
Engine stand	Don Wentz	503-696-7185
Engine hoist	Norm Rainey	360-256-6192
Surveyor's transit level (handy way to level wing and fuselage jigs)	Bill Kenny	503-590-8011
Back riveting contraption (large, counterweighted bucking bar and suspension system and offset back rivet sets)	Bob Neuner	503-771-6361
Lead crucible (for melting lead for elevator counterweights)	Doug Stenger	503-324-6993
Table saw taper jig (for tapering wing spar flange strips)	Carl Weston	503-649-8830
48" pan break located at hanger PLS D-10 at Troutdale if an RV builder needs some metal bent.	Kevin Lane	503-233-1818

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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 either Randy Lervold or Home Wing**. 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!**

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RV-4 Wings

RV-6 Fuselage

RV-6A Finish kit

RV-8 Flying

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 Randy Lervold, Editor
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