



The Newsletter of the Portland RVators; Builders and Fliers of Van's RV Series Aircraft



August Meeting

The August meeting was at my "Big Ugly" extendo-garage, where I've been fitting up the ailerons and flaps on my RV-6 wings. Turnout was good with around 40 people attending, which meant it was pretty cozy. But the weather was good so we were able to spill out into the driveway.

Discussion was lively and included several flying stories. We heard trip reports from some members who attended the EAA Arlington fly-in, and from some of the folks from Van's who went to Oshkosh.

Bill and Ken gave us a bit of information on the newest RV, the RV-8. They're still being characteristically tight-lipped about performance and availability, but they did say that when Van decided to open it up on the way back from Oshkosh, he walked away from the rest of the RV crew pretty quickly.

There were several guests and new members, and I'm sorry to say I wasn't able to talk to them all. I know there are a lot of new builders looking for advice and information - hopefully they were able to find it among the group members.

I had already finished fitting up the flap and aileron on the right wing, and Doug Stenger had agreed to demonstrate the "right way" to do it on the left one during the meeting, but I wasn't quite ready by the time we got started. That didn't stop him however, and shortly after we wrapped up the program he had me over at the bandsaw, blazing away on the flap brace, in the middle of a crowd of people! I must admit I was a bit tense working on my plane in the midst of all those people, not to mention letting someone else touch my "baby". But since we ended up taking about 15 minutes to do a task that probably would've taken me more than an hour by myself (and did a better job of it too), I'm not complaining.

As usual the meeting lasted pretty late, and after walking a few of the remaining die-hards out to their

cars at round 11:00, I returned to the garage and found my wife Jeanne and Sun Benua still in there, leaning on the wing and talking away -- the first time in history that a couple of spouses closed up an RV meeting!

Meeting Notice

Frank Justice, Meeting Coordinator

Place: Bill Kenney's Homestead
16420 SW Beef Bend Road, Sherwood
Date: <i>FRIDAY</i> , September 15
Time: 7:00pm
Phone: 590-8011, 590-3342

Fifth Anniversary Builders' Group Meeting

September marks the fifth anniversary of the Portland area RV builders' group. The very first meeting of the group was hosted by Bill Kenney at his shop off Beef Bend Road in Tigard. To celebrate this momentous disruption in the home life of so many people, Bill and Brent Ohlgren are setting up a big gathering for us at the site of the original.

Due to its magnitude this event will be held on **Friday the 15th** rather than the usual second Thursday of the month. To get to Bill's place, follow Scholl's Ferry Road to Beef Bend Road; there is a yellow flasher where you turn south. This point is about three miles west of highway 217 and about one mile west of Murray Hill Road. If you are coming from Hillsboro go south on either River Road or 219, then follow 210 southeast until you get onto Scholl's Ferry, then go another two miles to Beef Bend Road. Follow Beef bend for about one mile and look for Bill's place on the right, just before you reach a sharp left bend in the road at some greenhouses.

This will be a potluck deal. Bill will provide BBQ boneless pork ribs, hamburgers, hot dogs, baked

potatoes, and pop. For liability reasons we ask that you bring your own beer. As is the custom around here, we won't try to organize what people bring, so just make up your favorite offering of salad, dessert, relish tray, vegetable, chips, or whatever.

This will be more of a family gathering; the swimming pool will be heated up and so will the hot tub for the kids. For the more airplane-minded there will be a VCR set up in the shop showing videos from Van's and various other sources; if you have some interesting flying tapes bring them with you. Bill and Brent's projects will also be on display but I don't know if they plan to hold a "Find the Dings" contest.

As always, bring any tools and fixtures you have to share.

General Business

Randall Henderson, Editor

Thanks For The Help!

At the August meeting I whined and moaned about needing help with the newsletter, primarily the mechanics of sending it out. Several people offered to help -- more than I could use in fact! I ended up working out an arrangement with Gary Standley that will work nicely for me. Gary will be getting the copies from where I have them printed, and will fold, staple and mail them. Anyone who still wants to help with that, give Gary a call -- it's out of my hands now, thank goodness!

Of course there is still plenty of room for articles, builders tips, etc., unless of course you're content with reading all about RVs from just my point of view....

Top Ten List

I was thinking the other day about how ritualistic some of the things we do are and just how obsessed many of us are with this whole RV building thing, and it was kind of creepy -- so much so that I felt compelled to write down a list of the....

TOP TEN WAYS RV BUILDERS ARE LIKE A CULT

- 10. Followers give all their money to, and spend years following the one they call "The Designer"
- 9. Make yearly pilgrimages to the sacred place where it all started
- 8. Requires a complete change of lifestyle
- 7. Members usually act like normal people, but aren't
- 6. Bizarre initiation rites, including body piercing (drill / pneumatic dimpler through finger), ritual skin painting (primer overspray, pro-seal), and the donning of frightening masks and headgear (respirator/hearing protectors)

5. Lives guided by scrolls covered with complicated runes and hieroglyphics

4. Often heard repeating the same mantras and chants over and over again ("Ow ow ow ow ow @\$&#... ow ow ow ow ow....")

3. Believe theirs is the only true way, and all others are misguided

2. Take pains to lure other potential "converts" to do what they're doing

1. Sincerely believe that their way will one day lift them up to a higher plane

Subscriptions Due:

Look at the date under your address on the cover. **THAT IS THE DATE YOUR \$10 IS DUE.** Mail to me or give it to me at the next meeting (my address is the return address on the cover). If you are paid up but the date doesn't reflect this, please give me a call so I can correct it.



EVENTS CALENDAR

EAA Chapter 105 Meeting This month's EAA chapter meeting will be an end-of-summer fly-in/Potluck at Twin Oaks Airpark, on Saturday, September 23. Feel free to show up any time; the pot-luck is planned to start at 4:00.

EAA Chapter 105 "Breakfast at the Aileron Cafe" Saturday October 7, (first Saturday of every month) at Twin Oaks Airpark, 8am.



Van's Homecoming 1995

Randall Henderson

The 1995 Van's Homecoming Fly-in has come and gone, and as usual it was a great time, even for people like me who didn't even climb into an RV the whole weekend. Early Friday afternoon Rion Bourgeois and I piled into the Champ (Rion called "Dibs" on the front seat so I was forced to trust my life to his dubious piloting skills), and headed off on the long trip from Hillsboro to Sunset Airpark. We first dropped in at Twin Oaks to get some fuel, then headed over towards Sunset. But on the way we decided to do some sightseeing, and ended up over Scappoose, then out to St. Helens, then Vernonia... 1.2 hours later, we finally were in the pattern with a bunch of RVs at Sunset, and Rion somehow managed to get us on the ground in one piece. Isn't it great how much time you can save traveling in your own airplane?

No sooner had we landed than Ken came up and told me the auto parking situation was a fiasco. Where

were all those BG members who had volunteered to help? My response was something to the effect of: "what am I, their mother?" Turns out Chris Lund gets the "atta-boy" award for pulling that one out, as he spent a couple of hours out there directing cars before anyone came out to relieve him.

Then of course there were the RVs. One hundred and seven of them, by Jerry VanGrunsvens count. As usual there were too many to look at them all closely, but among the amazing number of beautiful examples of the builder's art, I did note several interesting innovations, including:

- Czechoslovakian LOM powered RV-3. The LOM is a 140hp supercharged, inverted in-line 4, and makes for a very different looking, long-nosed, deep chinned RV
- "Bladder Buster" supplemental fuel tanks, fitted on an RV-6. Neat looking wing extension tanks, and a great solution to the dilemma faced by all of those RV pilots who are cursed with large bladders.
- Cargo/fuel pods hanging off an RV-6 painted with a Navy Corsair paint scheme. I don't know how useful they are, but they sure do put that final touch of realism to the military look of the plane.
- Steve Bernard's RV-6 fitted with his new, and as yet not fully tested, up-swept wingtips. He reports increased stability and is hoping testing will confirm an increase in speed.
- An RV-4 (from Canada I believe), with retractable gear (even the tailwheel!) and a sliding canopy.
- And of course, the RV-8 -- man that thing gets off the ground in a hurry!

As always there were some "interesting" flying techniques observed, but for the most part people were courteous and well behaved in the pattern.

The potluck was great as usual, with good food and good socializing at the tables.

Saturday dawned gray and foggy, although plenty of people managed to make it over from HIO pretty early. I had finagled the right seat in Don Wentz's RV-6 in order to participate in the fly-out activities, but by 1:00 Don still hadn't showed up. Van took off in the RV-8 and returned soon after, trailing a couple of -6s and -4s. Apparently he went over to Scappoose and found Don along with some out of state RV-ers who were camping on the field, still sitting there waiting for it to "break".

By the time they got back, Jerry VanGrunsvens was giving a briefing on a planned flight to Pacific City, and I had managed to talk myself in to going home and working on my plane, so I gave up the seat to Rion Bourgeois. They didn't end up making it, had to

divert to Independence due to low clouds over the mountains. Rion said it was pretty interesting being in the middle of all these RVs trying to do a 180 at the same time, in a gorge capped off by the overcast.

Saturday evening was the Banquet, at Pumpkin Ridge Golf Club. This is a good place for a banquet, with a nice patio for cocktails, great atmosphere in the dining hall, and good food too. The presentation was entertaining and informative, except for the part where they asked yours truly to say a few words about the builder's group activity in the area. I can do OK in front of a crowd as long as I'm prepared, but this time they managed to catch me by surprise, so I was pretty lame. ("uh -- we good builders... closer to Vans... build more gooder airplanes... huh huh huh")

Already I'm looking forward to next year's homecoming!



The First Annual Aurora Builders' Workshop

By Frank Justice

On August 19 Aircraft Spruce and the Salem-Independence Chapter of the EAA held what is hoped to be the first of many homebuilder's workshops at Aurora airport. The purpose was to allow new and prospective builders to learn necessary skills to and ask questions of builders who have been through this before. Between the weather and the usual great breakfast served by the Portland EAA chapter, the day started off fine and got better from there.

All four major types of construction were represented; aluminum, composite, wood, and welded tube and fabric. Workshops were set up for each, and anyone who wanted could try their hand at any of the methods. You could weld some 4130 steel (actually fairly easy with a few minutes practice and a sharp eye), cut some foam and lay up resin and glass, and for those who really know the right way to build an airplane, pound some rivets and dimple some holes. In addition, Bill Benedict gave a long and thorough explanation of wiring techniques that held the undivided attention of all of the attendees. There were also a few displays by manufacturers and distributors including Terra (avionics), PS Engineering (intercoms), and Aircraft Spruce.

Quite of few of the people who came through were members of our group, even some who were already far into their project. As a result I spent a good part of my time trying to answer specific construction questions and at the same time setting novices up to try their hand at RV construction methods.

The event seemed to be a great success with the attendees, especially since there were a number of

finished homebuilts to look at, such as the RV-8, a Christen Eagle, a Kitfox, a Glas-Star, several other RV's, and even an Ultralight or two. I hope they do it again next year.



Corvallis Air Fair

Steve Kimura

I was working all weekend at the Corvallis Air Fair, and I was very happy to see Don Wentz, Jerry Springer, Jim Anglin, Larry Von Moos (Eugene), Hank Anderson, Rick Dickinson (N. Bend), Harmon Lange, and Jerry Sorrell (Woodland WA) with their beautiful RVs. Also talked to a couple of builders, including Jim Schrock. Thanks to all of you for coming down (up?)!

We also had TWO Lancair IV-Ps show up! That was exciting too, but a different kind of exciting.



Builder's Tips ...Thanks to all who share them with us!

Squeezer Yoke Size

One day last week two different builders happened to call me and ask the same question: what is the trick to not bending over 1/8" rivets when squeezing them with a hand squeezer? Since I'd had the same problem (long ago) I knew the answer pretty quickly: What size yoke are you using? The answer was invariably 2 1/2" or 3". I know all about this because I did the same thing. When I ordered from Avery I chose the BIG yoke, since it would be better to have the longer reach, right? WRONG. The larger yoke (Tatco anyway) flexes more which makes it harder to get a straight squeeze on 1/8" rivets. So get a 1" or 1 1/2" as your primary squeezer yoke, and either use the gun on the ones that are just out of reach, or get a deeper yoke just for those jobs.

On a related note, I broke down and got a pneumatic squeezer a while back. Man what a nice tool. I recommend it if you are willing to spend the bucks. Also Avery now sells a hand squeezer that uses the same yokes as the pneumatic, so you might want to look at that as an alternative to the Tatco. - *Randall Henderson*



Project Status

From **Gary Standley**, RV-3 prototype restoration project coordinator:

Progress has been slow this summer but there has been some. The fuselage is upright with the engine mount and gear legs on. Tail feathers are clecoed on the rear and the windshield/canopy frame are in place and seem to fit in spite of the turnover. I still think these frames are useable.

"Jockey" Brand Rivet Spacer

Mark off 1" increments on a strip of elastic waistband material. Then if you want to space, say, 15 rivets over a given span, tape mark #1 of the strip at the starting point, and stretch it so that mark #15 is at the end point, mark and drill. The advantages include 1) it only costs you an old pair of Jockey Shorts; 2) it conforms nicely to the shape of curved surfaces; 3) it doesn't scratch aluminum like the traditional fan spacer can. -- *from Brian Yablon on the internet, brian@lanart.com, who got the tip from Henry Hore of Canada, in a talk he gave at the EAA chapter 486, (Fulton NY) builder's forum*

Inverted Fuel and Flop Tubes

FYI, anyone that is using inverted fuel system with 'flop tubes'. I belong to IAC and they have published tech advisories on this before. I also have first hand experience from an acro-sport and a Pitts.

Most flop tubes are built with a fuel hose with a heavy weight at the end. This weight is usually brass but could be aluminum. You need the weight on the end so it will fall to the 'bottom' of the tank (bottom if upright or top if inverted). Some of these are designed with a 'O' ring on the weight so it does not damage the tank and it acts as a bumper.

This weight bangs around inside your tank and can chip away small pieces of aluminum from the skin. These flakes of AL will end up in you fuel screen. In the worst case it can lead to a hole in the tank and resulting fuel leak. On the Acro-Sport I had, the O ring had come off (very common) and the flop tube weight caused a lot of metal to show up in the fuel filter. I could see the O ring laying in the bottom of he tank. Just be aware of this and check the filter. I don't know how Van's flop tube is designed. The RV tank is much thinner than a Pitts tank which is probably 20 inches or so deep as it mounts in the fuselage. With the shallower RV wing tank, the flop tube would not have as much energy when it hits so it may not be as much of a problem. I also expect the RV's will not do as aggressive of aerobatics as we do with the Pitts, etc. Just something to be aware of. -- *Herman Dierks on the internet - dierks@austin.ibm.com*

Laird Smith and I spent an evening going through the box of miscellaneous parts we got with the airplane. We had the rudder pedal assembly in the fuselage and were trying to figure out the braking mechanism. We had two cylindrical type things with brackets that appeared to attach to the pedal and a bracket on the floorboard. By rolling the top of the rudder pedal we thought these should activate the brakes. Problem was the cylindrical like things had no place for a fitting for a brake fluid line and also wouldn't compress. Also, they seemed quite long for this application. So I took a big gulp and told Laird I would take one of them to the EAA meeting and ask the "master"(van) what these might belong to. When I showed them to van, being the wordy person he is, he said, "I don't know, they don't belong to that airplane." We really didn't think it did either, but had to ask. I wonder what other goodies we'll find and not know what to do with.

We still have the one wing to re-skin. The fuselage needs cleaning up on the tailcone and primer shot. Interior needs the goodies added, rudder pedals, stick, seat, panel. Canopy/windshield needs new bubble installed. Engine needs hung. There is plenty to do yet and time flies when you're having fun.

Remember, you don't have to have experience to get you hands dirty on this project. We have one guy from Austin, Texas that has helped when he was here visiting on business. There is no steady commitment required. Call me and I'm sure we can find something for you to learn on.

If anyone knows of any RV3 parts laying around, like a fuel tank for example, gear leg fairings, wheel pants, brake cylinders... None of this stuff has to function as this is a static display aircraft. However, they need to be in good enough condition for reuse.

The schedule is as always: 1st and 3rd Wednesday, 7-10pm and the 2nd and 4th Saturday, 10am-4pm. Gary ... (503)591-9040

Randall Henderson -- I riveted the bottom wing skins on last week (did the top skins first), tested the fuel tanks, and they're finished, out of the jig and stored in their cradles. Then I went out and bought... my FUSELAGE KIT! YAY! I inventoried the kit carefully found *all* the parts there, the only discrepancy was four bolts of the wrong type -- good job Van's! I borrowed Stan VanGrunsvens neat space-saver tapered fuselage jig, and am currently looking at the plans and getting ready to start whaling away on my fuse.

Stan VanGrunsvens is well along on his RV-6A fuselage. It's right side up with the skins riveted on, and he is currently fitting the tail to the fuse. Stan is building the classic "airplane in a bottle" -- it's in his basement and he'd never get it out but for the 4' x 5' section of concrete he knocked out of the basement wall and replaced with a "removable" concrete slab.

Dennis Jackson has moved his RV-4 out to a hangar in Scappoose, and is in the final assembly stage. It's obvious from talking to him that he's getting pretty eager to fly, and who can blame him!

Frank Justice, who is building an RV-6A reports: "The sliding canopy frame structure is complete and I have fitted the Plexiglas to it; need to finish drilling the holes. So far I have not found anything particularly difficult.

"I Just sent in a new revision of my instructions to the Web server covering all of the RV-6/6A fuselage kit that you can do before you get the finishing kit. " *[I expect he also has it available on floppy disk or hardcopy form -- ed.]*

Steve Kimura came up to Van's Homecoming with a check and left with an RV-6 tail kit.



New Members & Guests

Craig and Rosemarie Gee were at the meeting. This is the first meeting they've attended, although they've been members for about a year.

Daily Holman recently subscribed to the newsletter, although he hasn't been to a meeting yet. Daily is restoring an RV-3 that he bought damaged in Vancouver BC.

Other new members: **Larry Berry, Bob Haan.**

Guests: **Mike Graves, Melvin Miller.**



The Tool Exchange

This section is devoted to listing any tools, jigs, shop space, specialized machines, etc. that are available for loan, or "group property" that is available to pass on to the next builder. Please give me a call (Randall Henderson, 297-5045) to let me know if you have jigs, tools, shop space, etc. to loan, exchange, or otherwise provide, 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. Items for rent or sell should still go in the "Don't Want Ads".

Surveyor's transit level -- makes fast, accurate work of leveling your wing spars in the 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

Wing/Empennage jig (single). Coffee can lead melting gizmo with plenty of lead for your elevators. Randall Henderson 297-5045



Don't Want Ads

Let us know what you got but don't want, or vice-versa. Ads are FREE.

Pilot Avionics PA11-40 headset -- brand new, never been used, \$95. Randall Henderson 297-5045h, 690-1234w.

Leading edge fishing rod storage compartment kits \$20. Rion Bourgeois 646-8763

Four Cylinder EGT gauge for sale. Don Wentz, 503-696-7185

RV FLIGHT BAG is having a 25% OFF CLEARANCE SALE on everything in the catalog excluding earrings and RV models. Contact Judy VanGrunsvan at 33770 NW Bagley Rd Hillsboro OR 97124-8303 or call (503) 648-3464.

David Clark H10-30 headset with mic. No volume control. Works good. \$90 - Gary -- (503) 591-9040.

I have a used Warneke prop for a Lycoming O-320, 160 HP. It includes prop extension and all the accessories. It is 71"D x 72" P, and worked good on my -6. If any builders need a prop for their project, it would be ideal and less money than new. It has been flying for 3 yrs. and 300 hrs. with no problems. Jim Anglin 642-2797.

O-320 D2G 2024 SMOH by Western Cylinder Overhaul, Inc. Hollow crank, can be modified to C/S prop. Chrome cylinders using 1qt in 14 hrs. Will fit RV-4, -6, -6A. \$5500.00. Dave or Bill (503) 829-6379.

40 #8 closed end nutplates for fuel tank access covers - \$40 (10% below my cost). Note that the rivet spacing is different than the standard nutplates supplied with the kits, so if you have already drilled your access plate-reinforcing ring-root ribs like I did, you will have to fabricate new ones to use these nut plates. Also: two brand new old style (steel pot) Stewart-Warner fuel gauge sending units -\$20 for the pair. Rion Bourgeois, 579-8800, 646-8763.

Two not-quite new, old-style (steel pot) Stewart-Warner fuel sending units -- \$10 for the pair. The arms have been bent to fit the RV-6 fuel tank, but they're otherwise unused.

Avionics Work, \$20/hr. Experienced, will work with you. Tim Steele 452-2575

Heated Pitot-tube (Piper blade style), missing heater element, \$35. Brent Anderson 646-6380

3-month old Ilmorrow 920, GPS-North American Continent database. Wally Anderson 623-2328 work, 342-5240 home

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

Looking for any of the following: good quality floor mounted band saw, bending brake, sheet metal shear. Or just let me know if you've seen a good deal somewhere on one of these items. Randall Henderson 297-5045.

Before you order a rivet set for your gun, check out Wacky Willy's, they have all shapes and sizes, new surplus, for \$5 each. Also squeezer sets but beware! The shanks are "industrial size" and won't fit most of our squeezers. Also jewelers file sets (handy for deburring tight corners, etc.) for \$5. The number for their west side store is 642-5111.



Quote of the month: "Five years of your life will go by anyway. What will you have to show for it? a) beer, TV, & frozen food, or b) a homebuilt, hand-crafted airplane." -- Ken Scott

