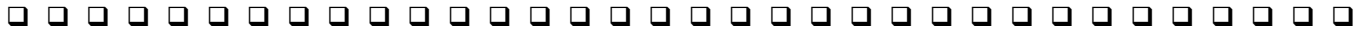


**The Newsletter of the Home Wing of Van's Air Force; Builders and Fliers of Van's RV Series Aircraft**



**April Meeting**

35 people and one dog showed up for the meeting at the site of Arnie Schmucker's RV-6 in progress. Arnie has much of the empenage completed.

Arnie is currently a partner in the infamous Champion Citabria that so many of us have been in, and he also flies gliders out of the glider port in North Plains. He had some experience in repairing fabric airplanes, which unfortunately doesn't apply too well to RV building, but he did attend one of Van's builders clinics recently, which puts him way ahead of where I was when I first started.

Much of the discussion at the meeting centered around our upcoming fly-in on June 22. Mike Seager got "volunteered" to do the mailings again even though he wasn't at the meeting, RionBourgeois agreed to handle the sodas again, Randall will be getting T-shirts made, and Don Wentz reported that Janet would be coordinating the food, although she's going to need plenty of help! Give her or Don a call (503-696-7185) *please* if you can contribute. At the May meeting we will be passing around sign-up sheets for volunteers to handle the t-shirt sales, parking, food service, and meet-and-greet, so have your volunteer pen ready! Other than that, members are urged to try to get to the fly-in around 8:00 AM to help with setting up, and of course to stay around late to help with the cleanup.

Don also talked about his recent rebuild of his fiberglass gear leg fairings, and showed us some samples of the different materials he used on both the previous iteration and this (much improved) one.

There were also some good builders tips discussed (see the "Builder's Tips" section).

**Meeting Notice**

Frank Justice, Meeting Coordinator (503) 590-3991 e-mail: [Frank\\_K\\_Justice@ccm.ssd.intel.com](mailto:Frank_K_Justice@ccm.ssd.intel.com)

Place: Carl Battjes' house  
 8318 SW 41st Ave, Portland  
 Date: May 9 (2nd Thursday of the month)  
 Time: 7:00 pm  
 Phone: (503) 293-4353

The May meeting will be held at Carl Battjes' house. Carl is the owner of "Chard 6" N6RV, which was the first side by side seating RV type aircraft, built by Art Chard in Michigan. It flew in 1976. Carl has the plane partially disassembled.

From Beaverton: Take Allen Ave. east past 217, and past Scholls Ferry Rd., jog right at 92nd to Garden Home Rd. Garden home goes right at fork just past Ole-son Rd. Turn right on 41st Ave. House is on the left in the first block, look for the Piper Cub mailbox.

From Portland:

Go South on I-5, take the Multnomah Blvd. turnoff. Left on 40th (at the traffic light), then right on Garden Home, and left on 41st. House is on the left in the first block, look for the Piper Cub mailbox.

**Note:** there will *not* be a June meeting. Be sure to come to the fly-in though!



**From the "Big Ugly"** (that's supposed to describe my shop, not me)

*Randall Henderson, Editor*

I keep reading about these guys who finish their airplane in record time -- 87 days I think is the current record. Well in case anyone was still wondering (and I'm sure they're not), I'm NOT going to beat any of those records. Some of us are not superhuman -- and PROUD of the fact!

I owned an old metal airplane once, one that was well cared for but still had cracks and corrosion. I don't like

dealing with either one. So I debur and smooth and polish everything carefully. And I etch, and alodyne, and prime, with epoxy primer. If I screw up a part I'm likely to get a new one from Vans and re-do it instead of living with it, even if it is just a cosmetic issue. I also like to talk to other builders. I like to go to builder's group meetings, and EAA meetings, and BS with RV builders and other airplane people. I like to go flying on weekends, and fly in to the EAA breakfast, and catch an occasional ride in an RV.

What this all means is that I've been a while building my airplane, and I'll be a while longer. While it's true that I'm one of those builders who wants to fly more than he wants to build, I do enjoy the building process, and I can be patient. I know that SOME day I'll be finished.

So I'd like to propose an opposite "record" category -- for the LONGEST time to build an RV. Currently in the group I know of a few contenders, and I hope they won't mind me hanging them out for everyone to see.... I know it took Dennis Jackson around 10 years to finish his, but hey, he's flying now, isn't he? And Gary Graham, with RV-4 plans #19, is going on 15 years now! But he's getting close to flying, and it looks like it's going to be a really nice RV-4.

Whaddya say we honor the "lifers" along with the record-makers.

**Top Ten List**

So last week my mom gives me this top ten list, and I'm thinking "Aw, do I *have* to put this in my newsletter?" If I know what's good for me I will....

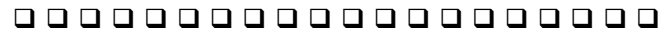
**TOP TEN LAMENTS OF A MOTHER WHOSE SON IS BUILDING AN AIRPLANE**

- 10. But, son, I left a message on your machine three weeks ago
- 9. No, my birthday was last month
- 8. I thought you promised to clean my gutters in '94
- 7. "I forgot" is not a valid excuse
- 6. Please put down that drill, take off that mask, and LISTEN
- 5. You're not listening
- 4. If you store the fuselage in my garage, where would I park my car?
- 3. I can rent a garage?
- 2. Yes, I'm terribly proud of you for building a plane, but...
- 1. Please tell me you're not seriously thinking of flying it!

**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. A

short note updating me on your status would be appreciated too. *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 Monthly Meeting** Thursday May 16 (third Thursday of every month), 7:00 pm at the EAA 105 Hangar/Clubhouse, Twin Oaks Airpark.

**Schrock's Fly-In**, Schrock's Strip (South of Corvallis) Saturday May 18 (unverified)

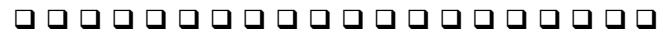
**EAA Chapter 105 "Breakfast at the Aileron Cafe" "** Saturday June 1 (first Saturday of every month) at Twin Oaks Airpark, 8:00 am.

**EAA Young Eagle's Day** Saturday June 8. If you want to give rides or help as "ground crew", contact Joel Haugen, 543-6879, jthaugen@bpa.gov.

**Salmon Arm BC Fly-In** Saturday June 15

**Fifth Annual Northwest RV Fly-In**, sponsored by the Home Wing of Van's Air Force (that's us!). June 22 Scappoose, OR. Don Wentz 643-2298, don\_wentz@SSD.intel.com.

**EAA NW Regional Fly-In** July 10-14, Arlington, WA



**Van's Quick Build Kits**

by Frank Justice

I just got back from getting the grand tour of the quick build RV-6 kits over at Van's, and for those of you who are more interested in flying than building this is about as good as you can get. These are not just a bunch of precut and prepunched parts, they are actually riveted assemblies ready for you to start on the fun parts.

In order to comply with the FAA rules that allow you to register the airplane as an amateur built there are certain odd things that are not done, but almost all of the boring, hour-sucking things are finished already. The tail assembly is almost done; you just have to make the rudder yourself, including marking and drilling (no prepunched skin). The wings are done except you must make the outboard ribs yourself out of a flat piece of metal. You also have one skin to rivet on. The fuselage skeleton is complete and all the bottom skins are riveted on. You have to make one small bulkhead from flat metal and trim, drill, and rivet on the top skins. All of this saves the average fully-employed builder about one and a half years by the calendar or about 1000 working hours compared to the most recent prepunched kits. You still have to fit the canopy and mount the engine and instruments. For this you pay about \$7000 more than you would for the regular kits, so it's a good deal for a lot of people. The kits they have now include sliding canopies and electric flaps.

Workmanship on these components is very good, better than most first-time builders can accomplish; there are no dings or extra holes and all the rivets are good. There are components sitting in stock and more are being shipped in. Right now you buy the whole thing at once, but they are planning to do a batch that does not include the empenage; this will be good for those who are already building the tail but have decided they don't have enough time to do the whole thing.



**Boeing Surplus Report**

*by Mike McGee*

I made it to Boeing Surplus on Wednesday April 24. It was my first time there. Wow! The hours are different than what was on the list of tool suppliers I got from the RV-list. They are:

Tues-Fri 10 to 5  
Sat 9 to 4

I was wondering about their restocking schedule when I saw that a large proportion of what was there at 10:30 when we got there was gone at 5:00 when they kicked us out. So much that there wouldn't be much left by the time Saturday rolled around. So I asked, and it turns out they restock EVERY DAY.

The two of us that went came home with about an estimated \$1000 worth of stuff for about \$400. I dug through the bins of 3X guns and air drills testing each one until I found one of each that I wanted. They had an air hose there so you could test all of the air tools. Most of what they had to pick from looked like stuff out of Star Wars but I still tried out a dozen 3X rivit guns before getting a Chicago Pneumatic for \$60. The air drill was \$40 and the 200 or so feet of 1/2" very flexible air hose (8 separate pieces) with high flow quick connectors was 50 cents / pound!!! Got an assortment of rivit sets for \$1 each , water trap and oiler for the air lines \$15.

Then there was the *snow storm* of drill bits and rotary cutting tools that I don't have time to start writing about.

It was easily worth the gas and time off work :) to drive there from Portland. I'll be back..



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

**Easy to Install Elevator Stops**

I didn't like the ambiguous design of the elevator stops in my RV-6 plans. There isn't a good place to rivet a stop to the h-stab rear spar, and I didn't like the idea of riveting a stop on the rear fuse bulkhead web which would require flush rivets in order to not interfere with the v-stab mount. That would also have worsened a condition of limited up elevator travel in my airplane.

Instead, I used a piece of .063 angle with one side cut down for the down elevator stop, and I used the rear

(and somewhat notched) 1/8" angle that's bolted to the longerons and v-stab as a natural up elevator stop. (It's part of the fuse anyway.)

For the down stop, I drilled a hole in a 9/16" length of .063 angle and mounted it with one of the four elevator horn AN3 bearing mount bolts (it required one longer size bolt). The angle is mounted with the bottom of the "L" cut back to provide the correct design limit travel. You don't really need a stop for both elevator horns; one side will do.

For the up stop, it's also not necessary to have both elevator horns hit the rear angle at the same time. Whichever one hits first determines the maximum control deflection and I had to do some grinding anyway. If you don't cut away any more material than necessary, you'll have a natural stop at the correct limit. I cut the stop surface of the angle to fit the shape and strike angle of the elevator horn. This creates a larger "impact zone." I found that I had to grind back the steel elevator horns too in order to achieve full travel. Otherwise, they would strike the rear bulkhead (even though my h-stab to rear bulkhead dimension is only about 1/32" short of the plans specification). If I had riveted a stop on the rear bulkhead, I would have needed to grind the control horns back even more in order to accommodate the extra thickness of the stop material.

I advise anyone just completing their tail to not even worry about getting the travel set up correctly until you mount your tail on your fuse. It turns out that it is just a waste of time until then because you'll be putting the elevators on and off countless times later anyway to get the travel right--might as well do it all at once! -- *Calin Brabandt N66VR (RV-6--almost at finishing kit!)*

**Poor Man's Sheet Metal Shear**

Cool Tool... Go to a used office supply center and pick up an old paper cutter. Makes a Great metal shear. Tends to curl the rem but cuts very clean straight edges on target part. You can really rip out those stiffeners for your emp. Mark position to set angle on cutter and - WHACK! - clean, straight, consistent, tapered stiffeners in 2 or 3 seconds each. I've used it for many jobs on up to .035 with no problems. After 3 years it still cuts as good as the first day. CAUTION!!! Watch those fingers, it'll take one off without any problem. -- *Mike Wilson*

**Applying Pro-Seal**

Pro-Seal is easier to spread with an artist's spatula. Spatulas can be purchased at an art supply store. The #2 spatula appears to be just the right size. This tip was given to me by Dan Benua. It has significantly eased the application of the pro-seal and made this task less messy. -- *Bob Haan*

**Tatco Squeezer**

After fighting with my Tatco rivet squeezer for a year I discovered that by removing the lever assembly which locks the handles together (for who knows what reason)

I now got more travel from the piston/cam and can remove the dies without having to screw in and out the gap adjustment. Mine had never turned very easily and I finally ground two flats on the piston in order to use a

small wrench to adjust it. Beware of a small spring-loaded ball which will fly out after the drift pin is driven out and the lever is removed (hit me right between the eyes!) -- *Kevin Lane*



**Project Status**

Home Wing member **Bill Drake** (Parkside Airpark, WA) has successfully first flighted his 180HP CS RV-6. He did some currency training in Van's -6 with Mike and was able to do the first flights himself.

He flew straight over to Scappoose where he intends to do the initial test flying, as Parkside is narrow and not a good place to learn an airplane. Only problem so far is total failure of the high pressure electric fuel boost pump. This is an item supplied by Airflow Performance. I have 260 hours on mine with no problem, so I expect it is a fluke. I happened to have a 'spare' so hopefully Bill picked that up and was able to get back in the air by now.

I could feel the RV smile over the phone! Needless to say, Bill is extremely happy with his -6, and to actually be flying it after the long building process. Congratulations Bill!!!! -- *The Duck*

Have you received your May issue of EAA Sport Aviation yet? If so you probably have read the great article by and about our own **Carl Hay** and his RV-6. Good work Carl! -- *rh*

**New Members & Guests**

Welcome new members Mike Billiar, Dean Pisropoulous

Guests Stephen Bonneville and Richard Craven attended the April Meeting



**The Tool Exchange**

*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.*

Custom-made Cutting Wheel Mandrel, for use cutting your canopy, made for the group by Stan VanGrunsven. These that have a knob on the outside of the mandrel, enabling you to use two hands, one on the die grinder and one holding the knob on the outside of the cutting wheel, which makes it much easier to guide the tool while it's cutting. I also have some graduated diameter screw dimple dies that Stan made -- useful for dimpling the tight spaces in the wing spar aft of the fuel tanks. Randall Henderson 297-5045.

Rion Bourgeois has generously offered to loan his joggle tool to group members who need it. Rion also has a couple of aileron/flap alignment fixtures. 646-8763

Aileron bracket locator tool. Adjustable aileron push-pull tube (for measuring the exact length to cut the real ones). Last I saw, Rion Bourgeois had this -- 646-8763h

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

Surveyor's transit level -- makes fast, accurate work of leveling your wing spars in the jigs. Also works to level your fuselage jig. 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.



**Don't Want Ads**

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

For Sale: 2 1/2" yoke for Tatco squeezer \$50. Randall Henderson 297-5045 5/96

Wanted: used 14v electric attitude gyro. John Anderson -- Summer 208-558-7475. Winter 702-294-0853. 5/96

For sale: Landol 35 amp lite weight alternator with Lycoming mount & voltage reg. New, never used \$75. Butch Walters (360) 636-2483 5/96

Trade: especially nice Bakeng Duce (Sport Aviation, Apr. 1995, pg 108) for equally nice RV3 or RV4. Please call Paul at (517) 644-2451 4/96

RV-4 Wings Available. Newly constructed wings include one-piece top skins, extended range fuel tanks (38 gallons), and foam-reinforced wing tips. Subassemblies for other RV models available. Art Chard 647-9803. 4/96

Mechanically experienced party interested in helping you put your RV kit together. George Ganoung 691-1694 3/96

1/4 Share in 1956 Piper Tripacer hangared HIO. 3100TTAE, 1050SMOH. KT76A Txpdr w/ Mode C, 4 place Sigtronics intercom, VAL com, Apollo Loran. Cleveland wheels/brakes, Peterson Autogas STC. Estimated flying expenses of \$65/month fixed costs including hangar, insurance, annual. \$25/hr for fuel, oil, engine reserve. \$4000. Call Steve, 324-8131 or email steven.l.harris@tek.com 12/95

Hangar/builder space available. EAA Chapter 105 Hangar at Twin Oaks Airpark. Builder space Includes the use of a large custom-built moveable builder's work table. \$60/month for space to build, or \$120/month to hangar a plane. Rion Bourgeois 579-8800w, 646-8763h.

Wanted: Apollo FlyBuddy GPS. For Sale: Electronics International 4 channel EGT w/probes. Don Wentz 696-7185

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

Hot tip! The low fuel level warning switches offered by Aircraft Spruce for \$35.80 can be purchased from the Madison Co. for \$22.00. They are model # M7700. Their phone number is (202) 488-4477. Chris Brooks (internet)



**"Home Wing" Newsletter Subscription/Renewal**

Please fill out and mail to **Randall Henderson, 7233 SW Benz Park Court, Portland OR 97225-3201**, along with \$10 for renewals or new subscriptions. 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) \_\_\_\_\_ Comments?

Progress:

Tail In Progress Finished

Wings In Progress Finished

Fuselage In Progress Finished

Finish In Progress Finished (i.e. flying)