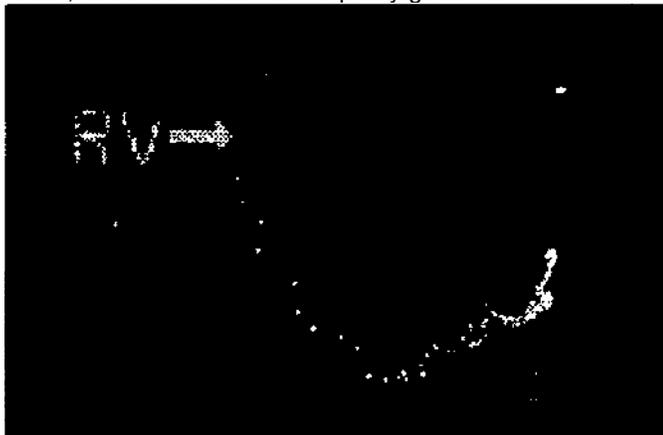


***The Newsletter of the Portland RVators; Builders and Fliers of Van's RV Series Aircraft***

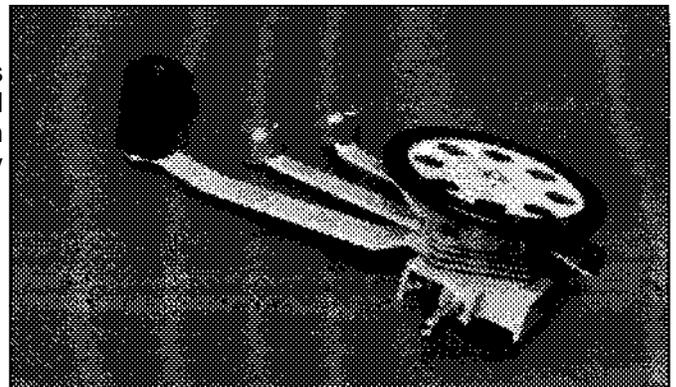
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**December Meeting**

The December meeting was at Rod Kimmel's place, where he is just getting started on his RV-6. On display was his vertical stabilizer skeleton, in the jig. Rod is using a primer he got from Aircraft Spruce that looked like pretty good stuff. It's kind of early to tell, but it looked to me like pretty good work so far!



Folks had no trouble finding Rod's place once they spotted the Christmas lights....



After the meeting proper, we retired to Rod's "home theater" and watched videos that were taken on a recent trip he made to Florida and Air Combat USA. It looked like an awful lot of fun, although he kept getting his tail waxed — by his ten year old son!

By the way, Rod found an extra calendar on his bench after the meeting — did anyone buy one but forget to take it with them? If so, check with me.

Brian Moentenich demonstrated his idea for instrument panel lettering using an antiquated drafters lettering template and pen. This sort of equipment is pretty much obsolete for drafters, but a person could probably get hold of the stuff cheap. Brian indicated he would do some more testing with this, and write it up for a future newsletter.

Brent Anderson showed off his custom made RV-4 combo throttle quadrant — a marvel of home-brewed engineering, which includes throttle, prop, mixture, and a nifty trim wheel. Brent said he'd make the 3d CAD drawings available to anyone who wants them but he isn't planning on making them to sell. Too bad....

**Meeting Notice**

*Frank Justice, Meeting Coordinator (503) 590-3991 e-mail: Frank\_K\_Justice@ccm.ssd.Intel.com*

Place: Frank Justice's
9725 SW 163rd Ave, Beaverton Date: January '11 (2nd Thursday of the month) Time: 7:QOpm Phone: (503) 590^3991

The next meeting of the RV Builder's Group will be held at Frank Justice's house on Thursday January 11 starting at 7:00 PM. The address is 9725 SW 163rd Ave, Beaverton, which is in the Bishop's Ridge subdivision on the eastern end of Cooper Mountain near the top.

To get there, turn west on Weir Road off of Murray Blvd. (just a few blocks north of Scholl's Ferry Road intersection). Go almost to the top of the hill and turn right on 160th. Go to 163rd Ave and turn left. Go up the hill to where you see a Victorian-style five-globe light post out front.

We will do a short tutorial on fitting the sliding canopy and the cowling (dreaded plastic work) on an RV-6A.

I promise to attend this meeting. I will also be looking for volunteers for the next couple of meetings.

As always, bring in any tools, templates, fixtures, etc. that you want to loan, trade, or show off.

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

*Randall Henderson, Editor*

**Wintertime....**

Christmas is over, I hope you all found the tools you were hoping for under the tree. Dan Benua came over and showed me the neat yoke for his pneumatic squeezer that he got from his mother — now how did she know that that was exactly what he wanted...? I kept looking for the big box with the O-360 in it but it wasn't there. I guess I wasn't good enough last year....

The Oregon Air fair brought with it a major ice storm, and turnout was lighter than usual but was still pretty good. I saw Frank Justice with a brand new Nav/Com, and Calin Brabandt picked up an angle drill attachment. I just got a dumb T-shirt. Several RV group members helped out with the EAA booth and simulators, and a lot of kids had a good ride in those things.

The windstorm was another matter. As far as I know there wasn't much damage to airplanes, but what little there was happened to be in the row of hangars that houses the Champion 7ECA that I'm a partner in. The wind blew the doors off the two hangars adjacent to ours, as well as the partitions between the hangars. Damage to the 310 next to us was slight, and neither our Citabria or the RV-3 that shares our hangar was damaged — that is, until the contractor came to put the walls back up! After they left there was damage to the RV-3's left aileron, which will probably have to be replaced, and the left elevator.

**Van's Air Force.... ?**

About a year and a half ago, when Don Wentz was the Newsletter Editor, we decided we needed a better name than just the "Portland Area RV Builder's Group. Several Names were proposed, the most popular of which were "Portland RVators" and "Van's Air Force, Home Wing". We voted on it, and frankly I was surprised when the vote came out in favor of the "Portland RVators". For one thing, I knew I'd end up

explaining to non-RV types that no, we're not square dancers (the RVators is the name of a group of square dancers who travel around in motor homes), and no, that's not an A for Aviators, it's an R for RVators.

Anyhow, that name has kind of rankled with me ever since, and in fact most people I've talked to seem to agree, so I'm not sure why the vote came out that way. Personally I like "Van's Air Force, Home Wing" as it says more about who we are - The "Air Force" part says we're flyers, and "Home Wing" indicates our close proximity and connection to Van's.

So since I AM the newsletter editor, I figure I can at least lobby to see if people would be amenable to changing it. I'd like to talk about it at the next meeting, and perhaps take a vote on it at then or at the February meeting. And if it turns out we still like "RVators", that's fine, I'll live with it and stop my whining.

**Builder's Group Discount from Quality Paints**

The other day I was in Quality Paints in Hillsboro, who sells automotive paint products (PPG, etc.), and I inquired as to whether they would consider a discount for Portland RVators members. They were quite agreeable, so if you go in there just let them know you belong to the group, and they'll give you the "body shop" price — usually about 10% off.

And if you happen get the chance to negotiate a similar arrangement with anyone else in the area, please let me know so I can put it in the newsletter.

**Calendars**

I still have Van's 1996 calendars, for \$8 each. Some people have requested that I mail one to them, and really I'd rather just stick to doing it at the meetings, as I don't have very convenient access to a post office most of the time. Of course for an extra 2 bucks plus shipping Van's will send you one.

**Top Ten List**

**TOP TEN RV BUILDERS' NEW YEARS RESOLUTIONS**

- 10. Work on the airplane instead of watching "Melrose Place"
- 9. Keep your job so you can pay for the thing
- 8. Go get a new respirator instead of saying "oh, these headaches always go away eventually"
- 7. Try to go a whole year without adding on more shop space
- 6. Learn to say "No, I can't come over to work on your airplane, I'm going to work on MINE"
- 5. Stop worrying so much about alodyning and priming everything to within an inch of it's life - I mean do you really care if it lasts 100 years instead of 50?

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- 4. Try to go a whole year without making any "practice parts" (fat chance)
- 3. Stay married
- 2. Help Randall out by writing an article for the newsletter (hint hint)
- 1. Just finish the damn airplane

**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). 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.*

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**EVENTS CALENDAR**

**EAA Chapter 105 Monthly Meeting** Thursday January 18 (third Thursday of every month), at the EAA 105 Hangar/Clubhouse, Twin Oaks Airpark.

**EAA Chapter 105 "Breakfast at the Aileron Cafe" "** Saturday February 3, (first Saturday of every month) at Twin Oaks Airpark, Sam. New Year's Grits!

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**Young Eagles Events**

*Joel Haugen, EAA Chapter 105 Young Eagles Coordinator 543-6879*

We will be looking for 6 volunteer "Eagle" drivers for the two occasions: 1) a trip over to the Tillamook Blimp Hangar Museum in March/April for one middle school science bowl team and; 2) a flight to an undetermined location for one high school science bowl team. We hope to coordinate the Tillamook flight with the museum folks over there to do some "Eagle" flights in conjunction with a Saturday breakfast and a run to the museum.

We will continue to plan on doing Young Eagles during each Saturday breakfast. It would be a nice goal to move the chapter up the annual standings this year.

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**Mystery RV-4**

*by Doug Weiler*

*I received the following interesting story via e-mail from Doug Weiler, President of the Minnesota Wing of Van's Air Force — Ed.*

I just got my copy of the Portland RV newsletter [Dec. 1995] and had to write to tell you about the "mystery RV-4" you saw at the Hilo airport. I was very much involved in that aircraft ending up in the Islands and thought you might like to hear about it.

The RV was built by Gary Novotny of Lake Elmo, MN. Gary was past president of the MN Wing and I watched this aircraft being built. It was a true masterpiece (in fact Gary came in 3rd overall at OSH in, I believe 1993.

Gary decided to sell the airplane that fall. (His reason for selling was mostly the fact that he was more a builder than flyer... The airplane was so pristine that he didn't like flying it.... bugs got on it.... it might get scratched... etc.) He put an ad in Trade-A-Plane and the ad was answered by a vet living on Hilo, Skip Pease. Skip flew to MSP and decided to buy it (\$50,000).

A local MSP-based aircraft exporter agreed to ship it. I got involved in the teardown. It was boxed and shipped to Oakland, CA by rail, then by ship to Honolulu and then by ship to Hilo. The cost to ship the RV was around \$6000 and took a little over 2 weeks. When the RV arrived Skip called us and said it was damaged en route. What happened was that the RV bounced a lot inside the crate when on the rail car and the very rear bulkhead where

the T/W attached was cracked. Also it had been tied down to the crate with "C" hooks from the fuselage/fuel tank fitting and these fittings were elongated.

Skip felt no one on the island knew anything about RVs. He paid for a ticket for Gary to come out and look at it which he did. He assessed the minor damage but didn't want to get involved in fixing it. When he got home he talked with another of our local builders (Tom Berge) and Tom thought it would be a great adventure for him to go to Hilo and fix it. So Skip bought another ticket for Tom and since I work for Northwest Airlines, I went along as a freebee and to play general laborer and all around go-fer.

We spent three days in a rusty hangar at the Hilo airport reassembling the RV and repairing the tail. Tom did a perfect repair job and I learned a lot about the whole process. The fittings were not too badly elongated and we successfully used the next size large bolts. This could have been avoided if the shipper had bolted a scrap piece of metal to these fittings and then attached the C hook to the scrap. It was interesting in that even the tires were worn out when the aircraft arrived. Apparently it was bouncing so much in the crate on the rail car that the tires were turning and they had scallops all around their edges and had to be replaced. The shipping company paid for the repairs and I believe one set of plane tickets.

We did not fly it cause we ran out of time. When we left, Skip had never flown an RV and over the next

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several months, took dual in another RV-4 (in Honolulu) and then finally flew his own. He has now been flying it for 2 years.

The reason it is outside is that hangars are just not available on Hilo. If they are available they rent for \$500/month. So Skip had the custom covers made and also a fiberglass "cowling cover" to cover the prop yet still allow air to circulate. Guess it has worked out OK for him.

I'd like to go back someday and go for a ride that Skip promised. Thought you'd like to hear the history of this RV. The moral of the story is, it probably would have been less hassle to fly the airplane there. If Jon Johanson can do it maybe it's not such a wild idea!

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**N-Number Reservations**

*by Randall Henderson*

You can reserve an N number without going through the whole registration process. All you have to do is send them a letter with your choices, and a fee of \$10 per year to reserve the number. That way you don't have to go through the whole hassle of registering just to reserve your number against the day you finish your airplane. The following is an N-number reservation form can be used for this purpose.

**RESERVATION OF AN "N" NUMBER**

I wish to reserve a Registration Number to be used at a later date.

The fee to reserve a Registration Number is \$10 per year.

My choices are:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

Signature:

Name:

Address:

Phone:

Mail request and Fee to:

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FAA Aircraft Registry PO Box  
25504 Oklahoma City, OK  
73125

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If you have access to the internet, it is possible to do a search of the FAA registry to find out whether the number you are interested in is currently in use. If you have world wide web access, access the N number search form, provided by Gunther Eichhorn of the Smithsonian Astrophysical Observatory. The web site address is:

[http://acro.harvard.edu/GA/search\\_nnr.html](http://acro.harvard.edu/GA/search_nnr.html)

You can also just call the FAA and they will look up a few numbers for you over the phone. The number for the registration branch is 405-954-3116.

Note that there are rules about N numbers:

It can not start with the letters O or I

It may not exceed 5 symbols following the N

The symbols may be all numbers (N10000) , one to four numbers and a suffix letter, (N1000U) one to three numbers and two suffix letters (N100AB)

The first zero (0) must be preceded by a number 1-9.

**Insuring your RV**

*by Gary Corde*

The cost of insurance will depend on many factors (total pilot time, time in type, hull value, limit of liability and TYPE of limits, to name a few). There are very few companies that will write insurance for homebuilts. Those that do consider the RV line to be the most desirable. If you contact your favorite insurance broker, have him obtain quotes from COMAV or Southern, they do a good job and are well priced. However, if you like to talk to a direct writer, AVEMCO does a good job (I have heard several nightmares regarding claims, so be careful). You'll find that the above companies will be with-in \$100 to \$200 (depending on coverage) of each other.

For the average RV pilot (250+ TT, 100 TW) expect to spend about \$1,200 - \$1,300. This is based on a \$50,000 hull and \$1,000,000/100,000 limits.

For you new guys just finishing your planes, you will spend slightly more until you get some RV time. It will help you greatly (from a cost stand point as well as a safety stand point) to get as much tail wheel time as possible before completing your tailwheel RV. Insurers will like to see 250 TT, 50 to 100 TW. Having an instrument rating will generally save you a few bucks. If you can get 10 to 25 hours in an RV that will help a lot.

I'll clear up some points from other posts. AVE MCO and National are THE SAME COMPANY. National sells a striped down AVE MCO policy that isn't worth the \$50 to \$100 you'll save. BTW, AVE MCO will dicker a bit to make a sale.

If you want quotes from a broker, choose one and don't jump around to 2 or 3. The insurers will release the same quote to each (they log you into their system by name and N#). The insurers will get sick of seeing your name pop-up so often and will get the impression that you are price shopping only, which of course you are.

As far as not insuring the hull, that's a tough call. My RV cost about \$40,000 to build, and it wasn't with spare cash sitting around. If I lost the airplane my family would suffer a financial hardship. Additionally, if you have a partner, I think that it is irresponsible to the other to have him/her suffer financially because of your mishap. But money is money. BTW, DON'T attempt to save money by under insuring the hull. If you do this, the plane may be totaled with only minor damage. I would hate to see an insurance company take your \$50,000 RV, that was insured for \$30,000, due to \$20,000 of damage.

I hope that the above is helpful. If anybody has an insurance question, don't hesitate to contact me.

*Gary Corde is an Aviation Insurance Broker, and originally posted this article to the internet rv-list. His e-mail address is aol.com! RV6junkie@matronics.com*

*[Ed. note: also remember that you can get a break if you participate in the EAA Technical Counselor and/or Flight Advisor programs]*

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

**Removing Protective Plastic Covering**

The plastic covering on the aluminum sheets and spars can be removed easier if you heat them. Van's recommends a hair dryer. I have a heater in the shop and heat the sheets or spars in front of the heater blast. I would estimate the force required to remove the plastic covering is 2 to 3 X less when heated. — *Bob Haan*

**Sherwin Williams Primer**

When I was at Van's workshop a few weeks ago I noticed that the parts they had just primed with Sherwin Williams primer looked different and better than mine. Sherwin Williams is two parts: (1.) Industrial Wash Primer PP60G2. (2.) Wash Primer Catalyst Reducer R7K44. They told me they do not use the recommended mixing formula of 1.5 Catalyst Reducer to 1.0 Wash Primer but instead use 2.5 Catalyst Reducer to 1.0 Wash Primer. I tried this and found it easier to spray a light uniform coat, it dries quicker so

it is easy to paint one side and then wait 10-15 minutes and then do the other side, and it appears to be as hard and durable - perhaps even harder. I also tried 2.0 to 1.0 and went back to 2.5 to 1.0 because it seemed better. - *Bob Haan*

**Custom Dimpling Rudder and Elevator Skins**

Harold Steiner in Idaho showed me how to dimple rudder and elevator skins by taping rivets in place, laying the skin, rivets down, on a back-riveting plate and completing the dimpling with the rod from the Avery arbor fitted with a female dimple die. We got dimples custom fitted to the rivets which gives really nice results with no scratches from shifting the skin around under the Avery tool.

Worked well on my rudder skin and I plan to use it on the elevators. — *Brent Baxter*

**Fixing Cracks in Plexiglas Canopies**

A crack in Plexiglas can be repaired and left looking like a "weld" or made invisible with the Micro-Mesh sanding system. To accomplish this, a "glue" bottle needs to be obtained from a local Plexiglas supplier. The glue bottles I used were just a plastic bottle with a thin tube for wicking the glue into the crack. The "glue" is made from acetone and a matching color piece (left over trimming) of Plexiglas dissolved in the acetone. The smallest hole possible should be drilled at the end of the crack. The trick is to move the tip along the crack at the same rate that

the glue is flowing into the crack. The hole and the crack become filled with the glue. Don't spill any glue anywhere else on the canopy. This glue is actually liquid Plexiglas, and is not just bonding the crack together, but making it parent material. Any drop of glue on the canopy becomes a permanent drop. To remove it, it would have to be sanded out with the Micro-Mesh. BTW, don't substitute MEK for the Acetone. Plexiglas is an acetone based plastic, and the "glue" is parent material. — *Jim Ayers on the internet RV-list 102337.2252@compuserve.com*

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**Project Status**

**Steve Kimura** sends this progress report: "Picked up my -6A tail kit on 9/1 at the homecoming, promptly ran out of money buying tools, and found lots of excuses to not start. A friend who scratch-built an Acroduster kept bugging me to start, so I borrowed some tools and by New Years I got my elevator bearing primed and assembled, and the rear HS spar mounted on the jig."

**Walt Cannon** reports: "I am hardly a local to Portland (Seattle), but never the less I always appreciate it when your newsletter arrives. My RV-6 is coming along quite well, I am about 2 years into it and find out it is even more fun when the damn thing starts looking

like an airplane!!! It's on the gear, canopy fitted, panel in, and the engine is in my shop getting cleaned up and ready to mount. I have come to the homecoming fly-in the last couple of years in my vintage old T-18, but it has recently given up its low time O-360 A1A for the RV cause. I will be receiving a new Hartzell from Vans at years end and went with the VM1000 instrumentation system. Other than these goodies, it will be a basic simple RV that I hope will go like stink."

**Rion Bourgeois** just finished the somewhat daunting task of fitting up his aileron on his RV-4 wings, and is working on the gap fairings and preparing to fit up the flaps. Rion used the same method I did, which was to fret over the "suggested methods" and finally give up and call Doug Stenger in for help. It's not a difficult task, but we both worried a lot about getting it just right.

**Randall Henderson** - I finished building up and prepping all my fuselage bulkheads, then decided to not only prime them but also ALL the other fuselage parts, to get it over with as well as protect them from scratches and such. So that's what I spent most of my vacation doing. Man there are a lot of parts in that fu-

selage! One advantage to doing this is you get a bit more familiar with the parts and they start looking a bit less like just a big a pile of aluminum. I used a neato "fresh-air system" that Don Wentz rigged up - it's just a long vacuum cleaner hose attached to what used to be a respirator, with the cartridges taped over with duct tape. Looks like hell, but hey, it works!



Priming fuselage parts. Wings are on the right, covered with plastic.

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**New Members & Guests**

**Kenneth Ferrara** who lives in Woodbridge, VA, got our address from the RV-list internet newsgroup, and signed up for the newsletter. Ken is currently building an RV-4.

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**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.*

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

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

Also RV-6 Fuselage Jig

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

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

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**Don't Want Ads**

*Let us know what you got but dont want, or vice-versa. Ads are FREE.*

1/4 Share in 1956 Piper Tripacer hangared HIO. 3100TTAE, 1050SMOH. KT76A Txpdr w/ Mode C, 4 place Sigtron-ics 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

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RV-6A Tail, Wings & Tools for sale. Tail finished, wings partially finished. Includes heated pitot tube (plumbed & installed), electric elevator trim kit (not installed), all tools, including Avery Master Build kit. Wing kit has the latest improvements, including pre-punched skins and prefabricated aileron & flap stiffeners. Excellent craftsmanship - local builders Norm Rainey or Dick Zander have seen it and commented on the exceptional workmanship. Will sell all for \$8600 (my cost) Ron Gray 360-254-1501

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

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.

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 - \$36 (20% 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 (or have the new pre-drilled access covers & reinforcing rings), you will have to fabricate new ones to use these nut plates. Also: two brand new old style (steel pot) Stewart-Wamer fuel gauge sending units -\$20 for the pair. Rion Bourgeois, 579-8800, 646-8763.

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 11 morrow 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 Ptd 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)

**Wacky Willy Watch** .....neat/useful stuff seen at Wacky Willy's. West side store 642-5111

As of 12/1 they had a whole box of vacuum on/off rocker switches for \$1 ea. - probably not "aircraft grade", but they look like they could work for switching off your gyros to save wear and tear when doing aerobatics.

There was also a big roll of 1/2" rubber seal material with adhesive on one side - slit one edge and it could make a good canopy seal, although at 1/2" it may not be wide enough to fill the gap. I'm going to try it anyway.

Before you order a rivet set for your gun, check out their selection. 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 comers, etc.) for \$5.