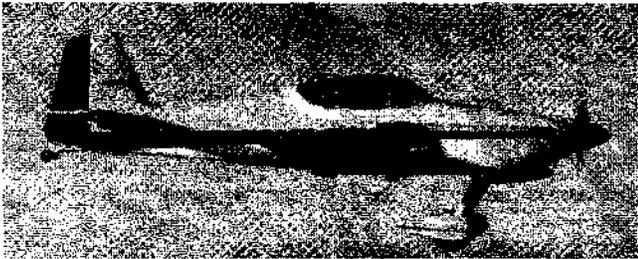


Portland Area RV Builder's Group

Issue 94.1

January 1994



December Meeting:

The December meeting was held at Advanced Technical Systems, owned by new builder Dave Locke. Him and his partner, Chris Lund, are fortunate enough to have a large shop area to work in, with the added benefit of their own personal machine-shop next door! They must have used the shop to make that beautiful Avery style dimple tool.

Once again we had a great turnout with lots of members and some visitors, and I'm sure they enjoyed the 'spread' layed-out for them. Dave and Chris have to get the prize for the best refreshment table ever to greet this motley crew of airplane nuts. Chips, dips, meats, crackers, cheeses, cookies, sodas, beers (you can tell where / hung-out!).

We had quite a few first timers who got to see a project in it's early stages. Dave and Chris had their vertical stab skinned (nice job too) and their horz in the jig. They were at a point where we were able to give them some good pointers on how to locate rivet lines on the ribs and skins.

Stan VanGrunsven demonstrated his rivet head shaving technique mentioned in the last nltr, with good results. We spent a lot of time selling T-shirts, calendars, discussing primers and spraying.

Finally, we wrapped-up with a tour of Dave's machine shop, including the computerized CNC machine. If you thought they drooled over the snacks, you should have seen this bunch watching that thing work!

Great job on the meeting and the Empennage guys, keep up the good work.

Next Meeting:

Place: Frank Justice's House
9725 163rd Ave
Beaverton

Date: January 13, 1994

Time: 7 pm

The next meeting will be held at Frank Justice's house. He has one completed wing and another one that is almost done except that it can still be taken apart. The idea is to show how easy it is to build a wing, and especially the no-pop-rivet version, if you do things in the right sequence. Two interesting variations from the plans will be shown; one is a heated pitot tube for instrument flight, and the other is the incredibly elegant Duckworks landing lights in the wing leading edges. (*Frank wrote it, not me! ed.*)

To get there, go almost to the south end of Murray Boulevard and go west on Weir Road (big church on the corner). Go almost to the top of the hill and turn north (right if you are coming up the hill) on 160th Ave. Turn left at second street, 163rd Ave, and go up the hill to 9725, the house with the 5-light Victorian lamp-post out front.

< Map didn't scan well >

General Business:

New Name??

We spent some time discussing this and came-up with some possibilities:

Van's Airforce - Home Wing
Hometown RVators
Portland RVators
Portland Area RVators
Portland Area RV Builder's Group

We'll keep thinking of names and kick it around some-more at the next meeting, ed.

T-shirts:

Thanks to all present who bought-up the remaining "2nd Annual Scappoose RV Fly-in" T-shirts. Randall was starting to wonder! There might be a couple of XLs left, if you missed-out.

Group T-shirts. Everyone present agreed that it would be fun to have our own T-shirt for the group. We could wear them at the next fly-in for identification even.

Randall has agreed to work on a "logo", the rest of us have to agree on what else to put on 'our'¹ T-shirt. Most felt our 'new' name should be on there, but there was some disagreement about putting anything else on it. Some liked a slogan for the back like "Friends don't let friends fly plastic airplanes", but others felt that might be a little extreme. We'll continue this next mtg too.

Calendars;

Van's has done a 1994 RV calendar, and I agree with Ken, it is a good one. Van's is offering an excellent good-guy price to builder's groups, so we voted on buying 100 calendars. I expect that most members will buy 1 or more at only \$6 each (I bought 5!!).

Norm Rainey suggested that we could sell them as fund raisers too. I think that is a good idea but in keeping with our 'un-organized' organizational mode of operation, I recommend that the effort be solely volunteer. As it turns-out, I have sold 4 more in less than a week, so I know there is an interest. I sold them to non-members for \$6.50 each, netting us \$2 per for the kitty.

I went ahead and used our funds to buy the first 100. If there is any success hawking them outside of the group, we'll order some more when the 100 run-out (provided Van doesn't mind the competition!). I wonder if Ken is going to regret the April picture... Look for them at the meeting!

Builder's Tips:

Primer:

Several of the builders in the group are using a primer known as a "wash primer". They have had good results and in fact, 2 of them are building their second RVs with it, and have over 500hrs and 5 years of service on the originals. This primer is also very popular in the area's rather large Aluminum Boat building industry.

Some of the things they like about this primer:

- > Looks good on, almost like anodized. The primer is clear with a slight tint.
- > Seems to wear well.
- > Sticks well.
- > Applies easily.
- > Less noxious than some of the epoxy primers.
- > Dries to the touch quickly.
- > OK to use in the cold.
- > Inexpensive (<\$20 per gallon?).
- > Available locally.
- > Can sit in the gun for several days and still be used.
- > Can be 'smeared' on or 'dipped', where finish isn't critical.

So, this is another alternative to consider, with some definite good points to it. Product info:

Ditzler Wash Primer (2-part)
DX1791 & 1792

Actually, we had a huge discussion about primers shortly after the group formed, about 3 years ago. Looking back, I think we really got carried away. When you think about it, except for some of the steel and non-alclad parts, these RVs probably need little priming. I'm almost 40 and consider myself to be at the 'younger' end of the majority of folks building RVs (although that seems to be changing somewhat), and the airplanes will almost certainly out-live us!

So, except for standard automotive primers, which are porous and absorb water, pick a primer that isn't too expensive, that some other RVer has used successfully, and build that RV!

Where to spray your Primer:

Many builders have an outside location that they use spray parts, to prevent overspray in the shop. This works well most of the time, but when it's raining (in *this* area?), or too cold, what to do?

Rion Bourgois installed a neat deal in his garage for those small parts, of which there are plenty. He

placed a box against the door and made an opening on the side near the bottom. The top of the box is open and covered with a wire screen. A fan is used to blow air out the lower opening to the outside air, causing low pressure at the top. He can then lay small parts on the screen and spray them right inside the garage, since the overspray and fumes continue down into the box and out the door. Neat huh?

Installing strobe power supplies:

This idea is from an east-coast RV-6A builder who is on our internet e-mail list, Richard Bibb.

When installing the one per wing strobe power supplies out near the wing tips, several folks suggested making an access hole in the bottom of the wing and mounting the unit to the back of the spar (that is what I did - ed). After looking at it for awhile, I decided that I could mount them to the fronts of the spars and, should they ever need service, access them thru the leading edge landing light holes.

That is a good idea for those who use the Bob Olds or Duckworks Landing Light Kits, or a leading-edge design of their own (too late for me, darn it! ed).



Don's Instrument Panel:

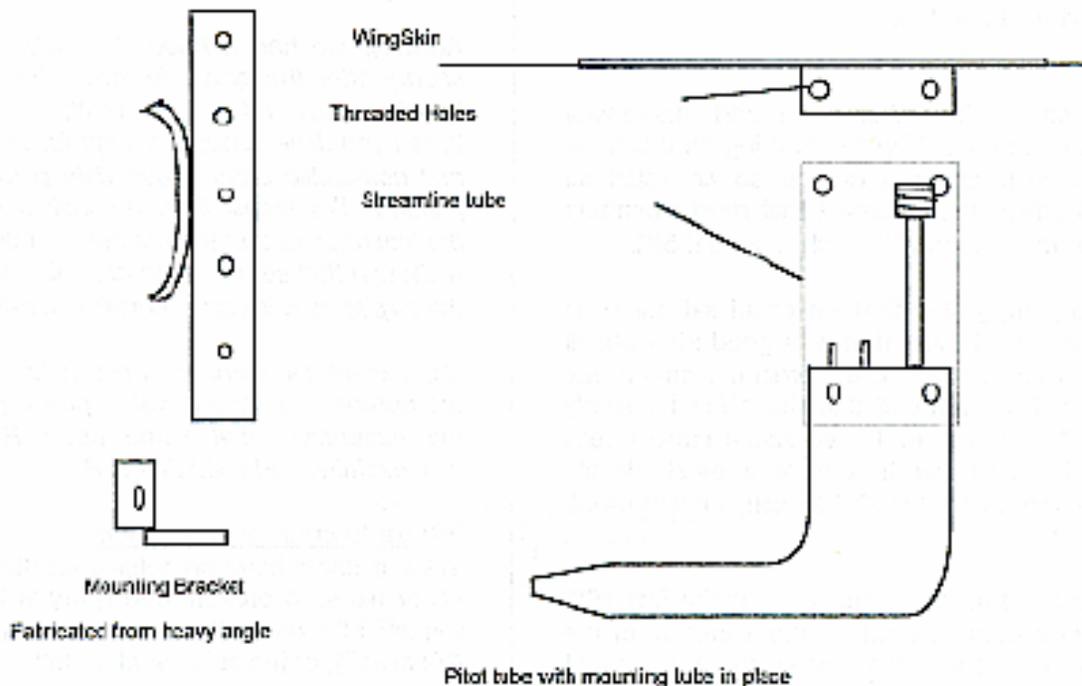
(Just thought I'd throw that in for fun.)

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Installing a heated pitot-tube:

If you plan to do any IFR flying in your RV, you will need to install a heated pitot tube instead of the plain tube that is included in the kit. Most of the homebuilders' supply companies sell a heated tube but not the bracket to mount it on. The instructions with the standard pitot tube that Wag Aero sells (Cat # G-655-000) recommend the use of a piece of streamline tube as an adapter to locate the inlet far enough away from the wing surface. The proper size tube (2.023 x .857 in. O.D.) can be purchased from Alexander Aeroplane or Aircraft Spruce, but only in 4130 steel at present. What to do next? Buy a bracket from Wag (expensive) or build your own bracket.

Here is a picture of the mounting bracket I made and showing how the streamline tube goes. The streamline tube will slide down on the pitot tube exposing the electrical and pressure fitting so they can be hooked up. The mounting bracket flat part goes inside the wing skin with only the bent ears protruding. The ears are shaped to match the inside of the streamline tube.



Make the mounting brackets out of 1/2" or 3/4" angle which is 1/8" thick. Tap the upper screw holes. Cut an opening in the leading edge skin which is just a bit smaller than the streamline, then rivet the brackets onto the skin. The best place to

leading edge skin which is just a bit smaller than the streamline, then rivet the brackets onto the skin. The best place to mount it seems to be between the innermost two ribs (good support because the ribs are close together) and just forward of the spar. Route the tubing inside the wing so that it protrudes out just far enough to get wrenches onto the AN fittings, but clamp it in such a way that it can still move up and down a little bit. The heater wire needs to be longer so it will reach the connection pins and have a little slack for ease of connection. Then cut and drill the streamline tube to the right length such that when the air tube is hooked up and the streamline tube screws are in place there will be no stress on the air tube. With the pitot tube I used that wound up requiring 3 inches of streamline tubing.

To finally install the tube, slip the streamline tube over the pitot tube and let it drop down. Hook up the heater and air connections. Slide the streamline tube back up and put in the screws that hold it to the pitot tube and the mounting bracket. Frank Justice.

(I wonder if locating it that near to the fuselage will subject it to prop blast? Another location is near the bell crank access hole, so you can reach-in the wing. This does require additional support. Good topic for discussion at the meeting. Also, new this unit costs \$125. I heard that Omak salvage sells them for \$35? Of course. I already had a new one when I heard that! Ask Frank if he has any pieces of that tubing left over, if you are interested in this set-up, ed.)

Thanks Frank! That drawing is great, ed.

Project Status:

Ken Scott's RV-6 passed the FAA inspection FIRST try! I expect all of those kibitzers hanging around his hangar can take partial credit for that. Nothing like having experienced builders to point-out those potential gotchas. Major congratulations for that Ken. We also have reports that, yes, it has flown! Alright Ken!!!! Sunday December 26 was the big day. The first flight lasted about 40 minutes and about the worst thing was a need for



some rudder trim. Other than that, Ken said there were few problems, the engine ran GREAT, and it survived the first landing. He managed another happy 45 minutes on the next day. We will be looking forward to reading your reflections about the HUGE moment next issue, Ken.

How many of us can remember the very first meeting of the PARVBG back in August of 1990 at Bill Kenny's shop? Remember seeing Ken's fuselage upside-down in the jig about ready for skin? I sure do, I had just finished my horizontal stab spar, after my first month as an RV builder. While I can hardly remember what has transpired on my project since then, I DO remember what it felt like to see a project that far along, when I had just started. Keep at it gang, they get up in the air sooner or later.

CONGRATULATIONS KEN!!!!

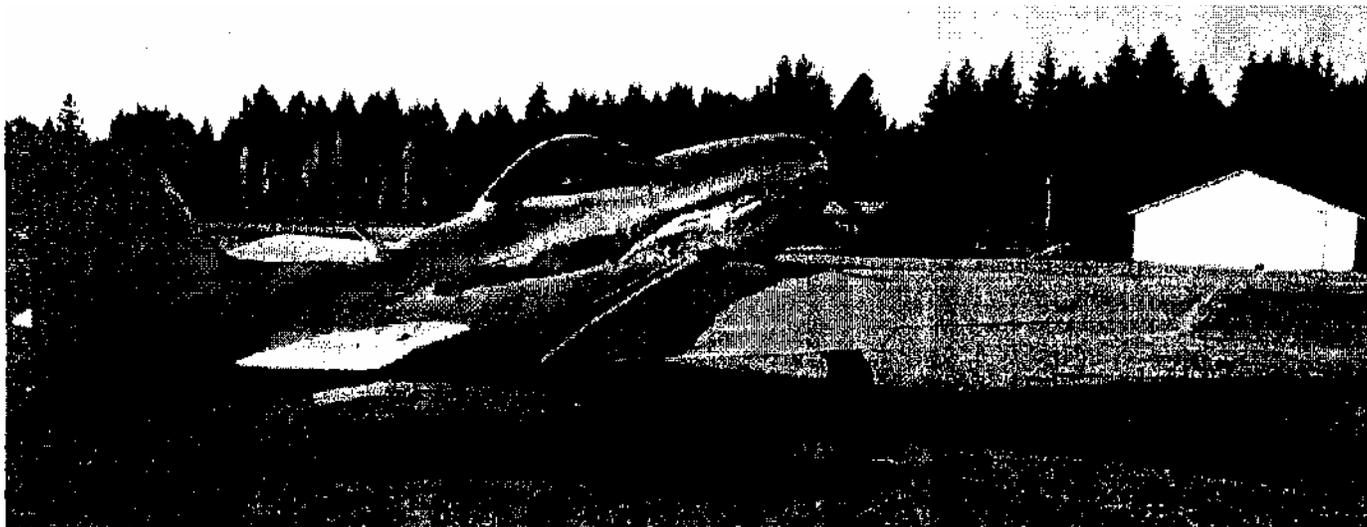
Randall Henderson reports that he's doing final preparation to his RV-6 wing spar parts and is almost ready to start riveting. He took the parts to Phlogiston to have them sent out for anodizing, at a cost of \$125. He says that although he's building his own spars, he decided to have them anodized mainly to get a break from the etch, alodyne, and prime job he's doing on all his other parts. They look really nice, and no close-tolerance holes to clean -out!

While waiting for the spar parts to be anodized, Randall spent some time building an extension onto his single-car garage for more building space. He calls it a "temporary workspace extension", but Jeanne refers to it simply as "the big ugly". No word yet on what the neighbors call it.

Rion Bourgois is a bit further along on his RV-4 wings - he has all the ribs attached to the left spar and half on the

right. He said that Frank's tip to install the inboard-most rear spar flange strip rivets with the factory head forward; or towards the interior of the wing, would have been a big help had he known about it before he did the opposite. He ended up drilling them out and installing them that way so that he could get the inboard ribs to slip in between the main and aft spar. Rion used a pneumatic squeezer to set the rivets in his main spar and although they came out fine, he says if he had it to do over he'd just use the Avery tool. (If you still have a desire to do it pneumatically, Rion's squeezer is available for loan).

Bill Drake, who lives on Parkside Airstrip in the Battleground Washington area (rough duty, eh?), is in the final stages of installing the stringers on the bulkheads of his RV-6 fuselage. Bill is getting fired-up to get that project going. He also has a Taylorcraft that he does his tailwheel practice in. I'm dying to get behind the wheel of another TCrate, myself. Fun airplanes. Frank, be sure to sign Bill up for hosting a meeting when we get back into summer flying weather. We love those fly-out meetings (of course this hinges on how his neighbors feel about having a few extra aircraft in for a visit).



Just up the strip from Bill is this project. This is the 8/10ths scale *scratch-built* P-51 that Steve Harris and I have flown-in to peek at a few times during the last year. Did I tell you it was AWESOME? His brother did most of the design work on CAD, while Paul has done most of the fabrication/assembly himself. This was the last fitting before disassembly for painting. It has now moved over to my hangar at Scappoose to be prepped for test flights. Parkside is a little short for the initial phase of the test flight requirements, so he plans to complete the major portion of testing it at Scappoose. Can't wait to do some air-to-air photos/filming of this beauty.

How are the rest of you doing on your projects?

Don't Want Ads:

Let us know what you got but don't want. Ads are **FREE**.

Rion Bourgeois has a LARGE pneumatic squeezer that he used on his spars. Available for loan. 646-8763.

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

Builder space for rent. All tools, jigs, and experienced helping hands included. Contact Dave Lewis Jr. 640-

Engine stand - I'm not using mine anymore (yay!) so if one of you wants to, borrow it! I also have a temporary spar that was a big help during my fuselage construction, both as a help when building-up the carry-thru section, and as a 'stand' to support the fuse once off the jig. I have a cradle that goes with it. Don Wentz, 503-696-7185

RV-4 jigs no longer in use - Aileron, flap, rudder, elevator - all available for loan. Brent Anderson 503-646-6380 Looking for Tools that are no longer needed or partially completed kits. Dexter Kincaid - 538-9535.