



# RVator's Log

Newsletter of the Twin Cities RV Builder's Group

## June 2013

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### Upcoming Events

**June 8:** RV Seminar as part of Fleming Field's annual Fly-In. Lots of interesting talks during the afternoon. We're on at 3:30. (Details on page 6!!!)

\* \* \* \* \*

### Minnesota Wing Van's Air Force

**Pres:** Doug Weiler, 651-398-1184, [dcw@mnwing.org](mailto:dcw@mnwing.org)

**Sec/Treas:** Jim Lenzmeier, 651-633-8488, [jlensmer@msn.com](mailto:jlensmer@msn.com)

(the airport office was their house). Lefty was an ex-WWII flight instructor from Texas... tall... man of few words... able to fly the crates they came in. Ethel... short, stout, seldom ever stopped talking and yes, was the airport busybody.

My parents were not involved in aviation at all. My dad had a passing interest and would almost always relent when I begged to stop at any airport we happened to drive past. I was determined to start flying lessons when I was 14. That would give me two years to get my act together before being old enough to solo. My folks were 100% supportive but I was on my own as to earning the money for lessons. And they were

## Shop Notes

### Ramblin's from an Aviation Fossil...

When I retired five years ago from that now extinct hometown airline, I joined the Northwest Retired Pilots Association. Now this is kind of like caving in to those mailings us old folks get from the AARP. You'd have to drag me kicking and screaming to join up with the world's largest organization of old folks, but I did join the NRPA because a buddy told me they put out a great magazine. There's over a thousand members (all of which are a dying breed since NWA has joined the ranks of airlines that are only fond memories). As promised, the magazine NRPA puts out is first class with all sorts of great articles on the past glories of NWA pilots. One article last month was the story of four retired pilots (now in their 70's) who were all in the same Navy squadron during the Vietnam War. One memorable photo shows the four standing together in front of their A4 Skyhawks... young, lean, cool military shades, ready to do battle with the Viet Cong. Wow... time passes.



Which brings me to May 6, 2013. Jean tells me this is REAL memorable as it is the anniversary of our first date. For me it is the 50<sup>th</sup> anniversary of my first flying lesson (that observation is just between you and me!). I really wanted to fly the -7 that day but the weather didn't cooperate. Had to wait a couple days but I managed to buzz around the local area and got away with a reasonable landing.

First flying lessons may not be all that cool today. Airports are more sterile. No too many kids ride their bikes to the airport on a Sunday afternoon to watch airplanes come and go. But I did. From age 12 on, I would sit in church with my folks every summer Sunday morning just itching to get home, hop on my bike and pedal the five miles to the airport. I've mentioned Allen Airport before. Just north of Pontiac, Michigan in Orion Township, 2400 feet of grass sprinkled with rocks. I don't run across too many true mom and pop operations anymore but Lefty and Ethel McGran were just that. They very seldom ever left the airport



Lefty and Ethel circa 1967. An article from the local newspaper



May 6, 1963 - There was no greater nerd than I. Lefty obviously felt I should consider an alternative lifestyle.

not cheap then either. I had written a letter to the McGran School of Aviation to inquire as to the cost. A typed formal letter was returned indicating that they used an Aeronca Champ for training and the rate was \$8.50 solo and \$11.50 dual. Wow... a fortune!

But by spring of 1963 I had a plan. My paper route paid about a buck a week and I was mowing a couple lawns at \$3 a shot. In May I had enough for 30 minutes of dual so on the 6<sup>th</sup>, my dad drove me out to the airport for lesson one.

Champ N2475E was typical of most trainers: faded, patched, grimy, smelled of leaking avgas, and was the most exciting thing I had ever been in. Lefty managed to fold his 6'3" frame in the back and I had to stretch to reach the rudders. I have no idea if I learned anything on that first lesson other than I was totally hooked.

For the rest of that summer, my dad would faithfully drive me out to the airport and watch while I rassed with the Champ and tested Lefty's patience. He never seemed to get frazzled (except when I almost hit a tree trying to land one day, but that's another story). In fact by September, the lawn mowing was doing well enough to allow me to "upgrade" for an entire hour at time in the queen of the fleet: a 90 hp Champion 7EC with a real electrical system and a 12 channel Super-homer (that's a radio for you youngsters).

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ALLEN AIRPORT						
INSTRUCTION - SALES - SERVICE - RENTALS						
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M. Doug Weiler						
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From 1963 until moving away in 1971, I flew out of Allen Airport (later the name was changed to Oakland-Orion). Time was logged in Lefty's Champs, a Piper Colt and a Cherokee, and then a club 1959 Cessna 150. Lefty and Ethel have passed on now and the airport was razed in the mid 70's to build a GM plant. How can it be fifty years and 20,000 hours later? Lot's of great memories...

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## The "Stealth" RV

-Doug

Last week, Bernie Weiss called to offer to go out in his new RV-9 and see what I thought. Tom Berge had the honor of making the first test flight and Bernie had soloed it last month and now had about 22 hours logged. I never pass up the chance to fly a new RV so I took him up on the offer.

The RV-9 taildragger seems to always slip under the radar when folks talk about Van's lineup of kit aircraft. The concept of the -9/9A was to provide a "trainer" of sorts that would stress ease of handling over brute performance and aerobatic capability. Several RV-9As have been flying for years in our builder's group probably none more so than Pete Howell. Pete has praised the virtues of the -9A since he finished his machine and he has become renowned for racking up a long list of great cross-country trips. Pete has made several non-stop trips from Steamboat Springs, CO to Anoka.... just climb up high (say 11,500), full throttle, carb heat on, lean out and happily see about 5 gph on the fuel flow.

Bernie had built a -7A, which was sold a couple years ago. Apparently faced with a mid-life crisis, he decided to build a taildragger -9 (hmm.. a red Porsche may have been cheaper!) With Tom Berge's able assistance, the -9 was finished in about two years. He did his initial taildragger check in a Citalia and then took additional dual in Alex De Dominicis' RV-7 in Texas. His transition to his own -9 was a non-event.

I spent two hours flying his -9 during the Phase I testing and it was interesting to contrast it to my -7. Now with 160 plus hours, my -7 has been a great traveling machine. Cruise is about 168 knots at altitude and it is smooth and comfortable. If there is any downside to my -7, it is the very effective ailerons. Frankly I think they are too sensitive. Lot's of lateral rocking and rolling in turbulence. Hand flying it IFR is a REAL pain. WAY too much work to keep things on the straight and narrow. But that's what autopilots are for.



With a constant speed prop, the -9 gets off the ground in short order and shows a respectable climb. Not a rocket ship like my -4 and -7 but perfectly adequate. The first thing I notice is its' superior stability. Bernie's -9 is somewhat nose heavy (they added 10 pounds of lead to the tail to help with that issue) which adds to its stability in pitch and yaw. With the longer wings, the ailerons are noticeably stiffer than my -7 but I kind of like it that way. Certainly way better handling than any "spam-can" but not overly sensitive. It would make a much better instrument airplane than my -7.

I climbed up to 7500 feet for a speed run and found that it is about 10 knots slower than the -7. Still it trues a respective 155 knots burning about 7 gph (and at \$6 + for avgas, that helps the stretch out the fuel bill.) Motoring along trying to acquaint myself with the new Garmin G3X EFIS boxes, the -9 is a very comfortable traveler. And BTW, the Garmin 650 touchscreen nav/comm is REALLY cool. I must control myself and affirm that my 430W works just fine!!

Stalls in a -9 are just about a non-event. That high-lift wing really makes a difference compared to my -7. Indicated stall speed is just about 10 knots slower than the -7. That is going to translate to a real comfortable approach speed.

Descending back into ANE, the Bolduc/Lycoming/Superior 160 hp engine coupled with a set of Pmags is super smooth. Granted a Cato or other composite prop may be even smoother but I personally like the flywheel action of a Hartzell all-metal prop. I set up for an approach speed of about 60 knots and that works out just right. There is a pretty hefty pull required on the stick to make a nice three-point landing due to the forward CG. I did some digging on the Internet and found many -9's come out more nose heavy than -7's. Maybe the horizontal stab is lighter or the wing structure is different after of the spar. I don't know. But it is not a showstopper at all.



There are not a lot of -9 taildraggers out in the field, which is too bad. It is just a great combination of performance and low speed handling capability that makes for an attractive package. And of course it has that tail-wheel macho image which is critical to us baby-boomers. Bernie tells me he just loves it.



A happy builder makes it all worthwhile!

## ***Lessons from a Master***

*-Doug*

I subscribe to several aviation magazines (Flying, AOPA Pilot, Sport Aviation, etc.). Like most pilots I never fail to read accident report columns such as "I Learned About Flying from That", or "Never Again". It is sad sometimes that we have to learn from the mistakes of others but that has often been an effective way to adopt a safety mind-set. How many times have you said "That could never happen to me!" But are you absolutely sure? I certainly am not.



One great safety publication that I stumbled across is the “Flying Lessons” newsletter that is published by Tom Turner. It is a free subscription and one of the best sources on aviation safety I have seen. Tom is a master CFI renowned for his knowledge of Beech aircraft and is very active in the Bonanza Society.

Here is a link to his website. On it you can sign up for his weekly newsletter and I highly suggest you set aside a few minutes to ponder his topics. That RV is will be done one day and it'll be time to get safely airborne again.

<http://www.mastery-flight-training.com/>

## ***RV-8 Canopy “half-open” Latch***

*-Matt Dralle, on the RV-List*

I found a pretty ingenious canopy half-open latch system from fellow RV-8 builder Mike Zeller. The pictures pretty much tell the story along with my YouTube video of the system in operation.



The system has a free spinning cam and a latch that allows the canopy to be fully opened and closed normally. If you open the canopy just past half way, then pull it forward slowly, the cam will line up and fall into the latch perfectly and then will keep the canopy from sliding back any further! To close the canopy, you just pull on it and close it. To open it all the way, you just pull it forward a few inches, then slide it back all the way. The best part is that there is no chance of scratches on any paint and it seems to hold the canopy **\*very\*** securely in the half-open position.



A pretty amazing piece of engineering. Van's should just include this system as a part of the stock canopy installation. The latch kit only comes with the black plastic parts and that little machined aluminum fitting.



I needed a .125" spacer and wanted to use flush screws, so I fabricated some additional plates to go on either side of the latch. To give the whole thing a bit more strength, I made a backing plate out of .063" and added a couple of platenuts.



All of the bits and pieces will get black power coated to match everything else in the cockpit, so you won't even notice its there when all's said and done! Super Cool! Here's a YouTube video I made of the cam and latch system in action:

<http://youtu.be/f0BSlcYxU4M>

Pretty cool. - Matt Dralle

## So He Wants to Build a Plane

*Ed note: There are probably hundreds of great RV-related websites and blogs on the Internet. Everyone is well aware of Doug Reeve's Van's Air Force site (I still check it daily). Early on I found several blogs that were very well done and provide lots of great tips. One of the good RV-7 sites is authored by Matt Burch of Lawrence, KS (<http://www.rv7blog.com/>). Here's a nice article written by his wife, Mary...*

Mary here, talking to all of you who ladies whose husbands have said, "Honey, I want to build a plane in our garage." You're understandably freaked out right now – I was when I found out that building airplanes is one of Matt's favorite hobbies. Don't fret! This is a doable project! However, you shouldn't go into it blindly. Here are some things to expect from an airplane-building husband.

**This is a huge endeavor.** OK, you probably already figured that out. But let me give you a little perspective. Matt began building the plane in [Spring 2005](#). I started pharmacy school the following fall. I [graduated this month](#), but Matt's plane is still a year away from flying. This is not for the flighty (no pun intended). This is like having a baby. The plane will be a major part of your lives for years, if not the rest of your life. (Thankfully, there are no 3am feedings.) And much like a baby, a plane will require you to invest a good deal of money and space. Consider:

1. You'll need workshop space. For a lot of you, this means you'll have to give up parking in your garage. You also might find an airplane canopy on your guest bed, or ailerons in your spare room.
2. It gets expensive. Builders need rivets, rivet guns, clecoes, pliers, drills, screws, an air compressor, wires, deburring tools, wrenches, countersinks, fiberglass material, hoses... It adds up, and will continue to add up throughout the project, as he'll need to get more and more stuff. The UPS guy and I are pals.
3. As I mentioned above, it takes a ton of time. If you want to be at his side 24/7 either be prepared for him to never finish the plane or go out and help him. Which brings me to my next point...

**Building an airplane is not just something for him to do. This can be a family project.** You don't have to be out

there every second – despite what the pictures on Matt's blog might suggest, I'm not out in the garage every time he is. It will go a lot smoother if you get involved. There are certain tasks that are a lot easier to do with a second pair of hands, and everything that gets done puts you a little bit closer to flying. Even going to the workshop for a few minutes to look at the neat new thing he built can be a big morale boost. And men, this is a two-way street. Make a deal that for every, say, 30 minutes, your wife spends on the plane, you spend that much time on something she likes, or do some of the household chores for her, or stay home with the kids while she runs errands. And speaking of kids, they can help too. But use your good judgment; letting your toddler handle a rivet gun is probably a bad idea.

**You'll meet a lot of new people in this process.** Your husband will probably make friends with other builders through [VAF](#), the [EAA](#), and local airports. *Take advantage of this!* For one thing, it gives him someone else to talk shop with when you get sick of the airplane stuff. For another, a lot of these guys are married too, and you and the builder's wives can commiserate. Airplane people are some of the nicest, most interesting people you'll ever meet. Far-flung airplane pals can also tip you off to places to visit on your next vacation and maybe even get you a free lunch somewhere.

**You need to be his #1 cheerleader.** I'm not asking you to put on a short skirt and wave pom-poms unless you enjoy that sort of thing, but airplane building can be a frustrating process, and your husband probably won't enjoy every part of it. (See also: [Matt and fiberglass](#)) Help keep him going during the difficult parts. If you can't help, come down and talk to him while he builds, or let him bounce ideas off of you.

**You may also need to keep him on task.** Again, not every part of this is enjoyable, and it's easy to get discouraged, especially for someone who has a demanding job. He may, like Matt, suddenly think it's more important to work on one of his [other projects](#) than the plane. While sometimes that's necessary (the plane can wait if Junior needs help with his science project), too much of that can mean he loses momentum and before he knows it, he hasn't worked on the plane in a month. Planes that don't get worked on don't get done, and we want these planes to get done. I once had to threaten Matt with no [slushes](#) for the rest of his life if he didn't give up his extra projects and just focus on getting the plane done.

**And finally, have a sense of humor.** So your friends all think you're crazy, you can't walk into your house without tripping over a just-delivered box of parts, and your [guest room](#) looks like an [obstacle course](#). So what? You and your spouse have a fun (hopefully) relationship-strengthening project you can do together, and even if you're only minimally involved, you always know what he's up to.

- Mary

Minnesota Wing – Van’s Air Force  
65 15<sup>th</sup> Ave. SW  
New Brighton, MN 55112-3454

First Class

## ***Minnesota Wing RV Seminar***

**Saturday, June 8, 2013, 3:30 pm**

**Terminal Building Classroom  
Fleming Field (KSGS), South St. Paul, MN**



The Minnesota Wing will take part in the annual Fly-In at Fleming Field this year. For the newbies in the club, we'll kick off with a discussion on "Which RV Should I Build?" RVs veterans Tom Berge and Doug Weiler will touch on the pros and cons of each model both from a building and a flying perspective. Then our special guest will be Jeff Peltier, engineer with BRS Aerospace Systems. Jeff will brief us on their efforts in designing a parachute recovery system for RV kit aircraft. Then we'll take a tour of the BRS facility on the field. This is REALLY going to be interesting so don't miss it!! For more info on the fly-in: <http://www.flemingfield.com/Flyin.html>

Fly-ins welcome of course!! Park on the ramp in front of the terminal building.