

# EAA Mount Rainier Chapter 326 Newsletter

Thun Field – August 2012

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## Burger Burn

**Sunday, August 12th, 12 Noon**

Smitty's Hangar, Thun Field  
Third hangar row south of the CAP building.

**There will be no meeting on Tuesday evening, Aug 14th.**

The Burger Burn is a potluck affair with static display of members' aircraft. And maybe a few demo rides. Park your planes along the taxiway opposite Smitty's hangar.

Bring your favorite dish, salad, desert, whatever... and lots of it.

The Chapter will provide the Burgers & Soft Drinks.

We are inviting all EAA Chapters from the surrounding area to join us. **We provide ALL the food**, so bring your extra large dishes and be a good host.

Set up will be at 10 am Sunday morning, same day.

## From the President

Summer is speeding along and I know I've been busy as ever, how about you? The Arlington fly-in was nice this year. We had great turn out for the chapter potluck. Thanks to all of you that made it a great event. I especially want to thank George for hauling extra equipment this year in the form of tables, canopies and the supplies for the dinner. It really made it nice. Oshkosh is behind us, marking another passage of summer. I look forward to hearing about it from those of you that attended. It was a big surprise to me that Van's announced a new model at Oshkosh the RV14A. Just proving that you really can't predict what they will come up with next.

Burger Burn is next up and we look forward to seeing you all out at the airport!

Andy Karmy  
Chapter 326 President

## From the Secretary

July 10th meeting:

Visitors:  
Con Ballard is from Lacey and wants to learn to fly.

Rob Hickman with Advance Flight Systems Inc. and his assistant, Jeffrey

This month we did something a little different since Rob Hickman, who came to speak to us about his products, flew his plane into Thun field so that we could all "ogle" his avionics. We had Rob talk first so that he could fly home at a reasonable hour.

Started in 1999, Advanced Flight Systems is a classic entrepreneurial story. An electrical engineer working with Robotics in Alabama, founder/owner Rob Hickman began building his own engine monitor during construction of his RV-4. Other local builders expressed interest and the company was born. His first engine monitors were a monochrome version. He redesigned to a color screen and it wasn't until Vans aircraft ran an article in their newsletter about Rob and his company that the company took off. Rob says that after that article there were 50+ orders coming in. He realized he would have to hire more folks to keep up with the demand. In 2004, Sport Aviation magazine ran an article on Rob's story. After becoming one of the most popular engine monitoring systems available for experimental aircraft, the AF-2500 grew into much more than a mere engine monitor. It became an "aircraft monitoring system" featuring other airframe monitoring and notification systems, a full-featured fuel computer, and an engine data acquisition instrument. In 2004 AFS purchased the line of AOA instruments from Jim Frantz of Proprietary Software Systems. AFS continued to support the standalone AOA instruments, but began integrating the patented AOA technology into its expanding line of glass cockpit products. In 2006 AFS became partners in a strategic move with AHRS maker Crossbow Technology and a further expansion of its product line - multi-function displays AF- 3400 and AF-3500 were introduced along with EFIS functionality. Rob, seeing complexity in the Aviation world, developed the 5000 series with a new high speed microprocessor for new advanced graphics and future updates. The Advanced deck AF-5500 has an 8.4 inch LCD screen while the Advanced deck AF-5600 has a 10.4 inch LCD screen, both complete with dimmer switch. The AF-5000 series comes with 21 buttons (knobs function as buttons when depressed), three knobs, and a joystick which means functionality is greatly increased. Rob says the eight way joystick makes data input and map selections much more convenient. The AF-5000 series with their super bright LCD XGA screen and internal AHRS has an in-flight video complete with Approach plates, ADSB traffic, weather, sectional charts (both IFR and VFR), and synthetic vision.

The EFIS -unlike other systems AFS horizon display is generated from an internal Crossbow AHRS that is based on certified boards and software. Rob says their display features a clear and easy to read airspeed indication with user adjustable color ranges, the altimeter is set using a familiar and convenient adjustable knob, and their heading display is generated from a remote mounted magnetometer. The heading can be displayed on

a tape across the top or with their new EFIS DG. Other flight instruments functions include a slip ball and user-configurable G-meter.

The aircraft monitoring and data acquisition system continuously monitors and displays not only all aircraft engine data, but several other aircraft functions as well. Rob says unlike other systems, the display can be customized to the users preference. Any of the standard instruments can be eliminated or added to the screen. The AF-5000 series has an advanced moving map that will interface to most external GPS receivers giving you a large and easy to read display. It currently displays public and private airports, terrain, obstacles, airspace, state lines, navigational beacons, intersections, and water. Airport information is also displayed including runways, frequencies traffic patterns, elevation, pattern altitude, and fuel availability. You can add their optional XM receiver module for XM weather and music for only \$2,200.00. The XM monitor is new and is being introduced at Oshkosh this year. Traffic can be displayed on the map from a Zaoon XRS, Garmin GTX330 Transponder, or the NavWorx ADS-B receiver. The 5000 series has built-in maintenance logs so you are able to keep track of oil changes, annual inspections, ELT, batteries, filters, brakes, and more. There is also a weight and balance that allows you to calculate your W & B in seconds. It will even calculate the weight of each seat in the plane. There are so many features with the 5000 series including a 1 button autopilot and the "nearest" button. Hitting the nearest button tells you where the nearest airports are from your present location. Press the button of the nearest airport you wish to fly into and the monitor will fly you to that airport.. Each system comes with an SD card for backup, de-clutter mode, and a Pilot PFD screen that won't work unless the PIC okays it. It will not work if a passenger types in something. Rob is now working to make an IPAD "talk" to the Advanced system. The only problem so far per Rob is if the IPAD is exposed to sun it will shut itself off. They are also working on a touch screen that will be coming out soon. Touch screens are not easy to press on the right spot while flying in turbulence, so AFS will keep the buttons on even with the touch screen.

The AFS Angle of Attack comes available as two different standalone AOA systems, the AOA Pro or the AOA Sport. The AFS AOA instruments can operate in and out of challenging airport strips, operate a high performance, a high wing loaded, or light wing loaded STOL aircraft, help you to make consistently good landings resulting from proper AOA/airspeed control. The AOA Pro is designed for experimental aircraft pilots. Angle-of-Attack unlocks Navy carrier pilots secrets and puts a priority on safety. All approaches should be flown at the same optimum approach angle-of-attack not the same IAS. With the AOA Pro you can now do precision approaches just like the military and airline pilots and accurately gauge Vx, Vy, best glide, L/D max, and maximum endurance AOA because angle-of-attack is not a function of weight, bank angle, fuel load, or density altitude. This revolutionary angle-of-attack instrument is based on a long known aerodynamic principle. The AOA Pro includes a four color liquid crystal display and a aural voice system which warns of critically high AOA, gear position errors and installation/hardware errors. This sells for \$1,495.00. The AOA Sport is designed for those light panels requiring simplified features, but still uses revolutionary patent pending sensing

techniques. This display is a 3 color LED ladder and includes the same aural voice warnings as the AOA professional. It can be powered with a 9-volt battery or by standard 14 or 28 aircraft bus systems. This instrument which has more resolution than the Navy's indexer used by Navy and Marine aviators today sell for only \$890.00. The AOA Pro and Sport are lightweight and easy to install. There are no probes to slow you down or collect ice and no moving parts to break. You can learn more by downloading the operation and installation manual on their website. Rob credits a lot of his success in Advanced Flight Systems with the support they offer to their customers and will keep offering whatever support needed to keep his company going in the right direction. They have a complete section on their website with tech support documents, EFIS training videos, AOA discussions & installations, instructional videos, general discussions, and announcements. Look them up at [www.advanced-flight-systems.com](http://www.advanced-flight-systems.com).

Special thanks to Joe Andre and Kathy Golden who brought ice cream and to Tom Brown who brought his very own homemade root beer to make floats.

Kerry Albritton,  
Secretary/Photographer



Kevin wins the door prize... yeah right

### Bad Day at Valentine

On Friday, July 27th, returning from Oshkosh, four of our members, Dave Babcock, Joseph Andrews (Jose), Harold Smith (Smitty), and Mike Salmon, landed at Valentine, Nebraska for fuel. During the landing, Smitty and Jose collided on the runway, destroying both airplanes and injuring Jose.

Jose is hospitalized at Kearney, Nebraska. He is in intensive care but his condition is improving. Friends and family are praying for a quick recovery. Our hearts are with Smitty as well.

## The Eagles Have Landed

*Darrin Dexheimer*

EAA Chapter 326 and Emerald Ridge High School have partnered together to build an Eagle's Nest RV-12. Our project, dubbed "EN-4" will be one of the first 5 projects in the nation (there are now 7 confirmed projects in the US). We have the space, we have the kids lined up, and we already have the kit and the tools. We need, you guessed it, Mentors! Our current hope is to have a mentor assigned to each major section of the plane. A team of students will be assigned to the mentor and work will commence. The mentor is there to answer questions, prevent damage (to the kit and the kids). Mentors build confidence, instill pride of workmanship, demonstrate and demand responsibility and accountability. Mentors build the student; students build the plane.

I'm sure you've all heard of Young Eagles. Here's what Eagle's Nest is all about. Eagle's Nest pairs EAA Chapters with local high schools to build a kit airplane. If this sounds similar to Teen Flight, the program sponsored by Van's Aircraft, you would be correct. In fact, Eagle's Nest and Teen Flight are in the process of merging.

The First Eagles Nest Project (ENP) commenced a couple years ago in rural Indiana. Bob Kelly launched the initial project at Jennings County High School in North Vernon in the fall semester of 2010. Initially the students honed their skills by building the aluminum toolboxes found in the Vans catalog. By early 2011 they had their first RV-12 sub-kit and the rest is basically history. The RV-12 built by the EN-1 Team was the number 2 aircraft in the "Vans Parade" at Oshkosh this year, right behind the new RV-14.

EN1, like Teen Flight, received quite a lot of press. In fact it was reading about Eagle's Nest in Sport Aviation that prompted me to contact Bob to pick his brain about how we could start a similar project in our area. As the past Young Eagles coordinator for our chapter I always wondered if we were just teasing the kids. I wondered if we could do more which led me to call, and then visit Bob and his team in Indiana earlier this spring.

If you're interested in being a mentor, e-mail me at [Darrin@boxbar.net](mailto:Darrin@boxbar.net) or call me at 312-520-4300. Or, better yet, talk to me at the burger burn. You can also visit our website at [www.eaglesnestprojects.org](http://www.eaglesnestprojects.org) for more information.

Darrin Dexheimer

## Van's New RV-14A

[http://www.vansaircraft.com/images/open/14/14\\_flyer.pdf](http://www.vansaircraft.com/images/open/14/14_flyer.pdf)

## Oshkosh Flight of Forty

I had the great privilege of flying in the 40-ship formation of RV's in honor of the 40th anniversary of Van's RV-1. Here is a video of the flyover: it begins 7 minutes into this video.

[http://www.aopa.org/aopalive/?watch=lqeXdnNTqnrSFDVjvMZ2gbWJUTe0SG9&WT.mc\\_id=120720epspec&WT.mc\\_sect=os&cmp=ePlt:Pho](http://www.aopa.org/aopalive/?watch=lqeXdnNTqnrSFDVjvMZ2gbWJUTe0SG9&WT.mc_id=120720epspec&WT.mc_sect=os&cmp=ePlt:Pho)



Here's the interesting part not in the video:

This diagram shows just the 4 and 0 part of the formation looking down from the top. I am C2. When we were on final 10 miles out, cleared by the airboss, and with everything set, suddenly A3, Rodoc, the guy in the middle of my line, pulls up and out... "Rodoc's out" he says. An immediate

pull up is the standard response to an engine problem... dropping down would cause havoc and hazard to all those behind which are stacked down somewhat.

We had three airborne spares, two also serving as camera ships. As luck would have it, the spare, Axel in his RV-4, was coaching the spacing from a position about 5 ships wide to the right side of C4. He slipped into position and without ever breaking stride we continued as if nothing happened.

Rodoc flies a Mazda powered, turbo, RV-6. He landed in a bean field and the chase plane, Rosie, another spare, reported he was down okay. Some farmers came out and discovered that the fuel filter was clogged... Rodoc uses mogas. They cleaned the filter, took off the wheel pants because they were broke, pushed him out onto the road, blocked traffic, and Rodoc was back at Oshkosh, parked with us in less than two hours.

Rodoc showed me a picture he took with his cell phone. Five farmers in beans about knee high and his airplane. Rodoc, Dave Leonard, is a doctor from San Diego. And this wasn't the first off airport landing for him, third or fourth according to the stories I heard.

Anyway, lots of time, gas, and sweat... all for 30 seconds over Oshkosh.

jb

## Nate Andrews

Nate flies a highly modified Swift out of Kapowsin airport. He flew in the Swift nationals at Creve Coeur airport in St. Louis (home base for EAA pres. Rod Hightower who made an appearance). The four-ship formation team he was on took first place. Pictures show the fly by past the arch. He is in the second four-ship. Can we take some credit for letting him practice formation with the RV bunch here at Thun Field?



Congratulations Nate!!!

## Calendar

**Aug 11** Scappoose, OR. [NW Antique Airplane Club Fly-in](#)

**Aug 12** Chapter 326 Burger Burn

**Aug 18** Cubs & Classics at Thun Field

**Aug 18** Van's Homecoming, Independence State, OR (7S5)

**Aug 19** Chapter picnic at Bergseth Gliderport

**August 24-26:** Republic, Washington (R49), 13th Annual Wings over Republic

**August 25:** Ocean Shores, Washington (W04) Ocean Shores Airport Appreciation Day

**September 1:** Bremerton, Washington (PWT) Blackberry Festival Fly-in/ Car Show

**September 7:** Hood River, Oregon (4S2), WAAAM/Hood River Fly-in.

end

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