

EAA Mount Rainier Chapter 326 Newsletter

Thun Field – December 2007

108

Christmas Party

Tuesday, December 11th, 6PM
Kevin Behrent's Hangar, Thun Field

No gift exchange.
Bring the family.

This being a pot luck and volunteer affair, there is no charge to attend. Kevin's hangar is #6, at the north end of the row of new blue hangars on the left of the entrance drive.

Food: The Chapter will provide ham and turkey and soft drinks. To supplement the Christmas feast and festivities, please bring to the table: last name beginning with:

A-F (36) bring a favorite dish.
G-N (37) bring a salad. No Macaroni please!
O-Z (33) bring a dessert.

Decorating and set up will be Sunday afternoon, Dec 9th, 3PM. Cleanup will be immediately afterward to include returning tables and chairs. That means a few trucks would be nice.

Next month is the Christmas party! The 11th of December, in Kevin's hangar as per our traditions.

Tim Pitner – cut a nice plaque tribute to Smitty for his chapter service.

Mike & Arleen got their RV7A signed off by Charlie this month. Ready for flight!

Paul weighed his RV9A at 1085 lbs nice and light with paint included!

Jeff started his RV8 engine for the first time this last month.

Dave is moving his RV9A on Thanksgiving to the airport!

Jeff is starting on his RV7A fuselage.

XXX is working on a scratch built CX4 project.

Bernie just got a 1981 Marquart Charger bi-plane.

Gordy got his RV7 painted out in Burns OR this last week!

Bill Kelly recently sold his RV8 project to Randy to finish it up. Bill has donated \$700 to the chapter as part of the sale! Thanks Bill for your generosity!

McChord Tower 253-982-6503 or james.glaser@mcchord.af.mil
You are welcome to call at any time for information about TCM or the Military areas.

From the Secretary

November 13, 2007

EAA Chapter 326 meeting

Jeff called the meeting to order... again!

Tonight's program:

McChord tower operations by TSgt James Glaser

American Eagle land speed project by Ed Shadle and Keith Zanghi

It's now time to get those dues paid for 2008! Hey it's only \$15 for an entire year of spellbound entertainment. 46 of your co-pilots have already paid up so what's your excuse?

Treasurer report = \$4360.73

Visitors: Keith Zanghi – Director of Operations American Eagle land speed project

Ron Regier – Interested in a tandem flybaby.

Jim Duffin – Piper Pacer, working on a 1946 Funk project

Owen Donaldson – 1946 7AC Champ, interested in RV's

First Flight

The RV-7A that started in January 2004 at a SynergyAir Empennage Building Class in Eugene, Oregon flew from the Olympia, Washington airport on Sunday, November 25, 2007.

With Arlene, wife/co-builder, son Jason and a handful of airport bum friends watching, N286JK lifted off for a 35 minute flight, and it was fun. Thanks to Technical Counselor, Harold Smith, Flight Advisor, Jim Triggs and the numerous builders who offered their advice, encouragement and skills.

The engine is a IO-360-M1 by AeroSportPower with a Raven inverted oil system, dual PMags by EMagAir and a Hartzell blended airfoil prop. Avionics and instruments are Dynon DY10A, Garmin SL-30 COMM/NAV, TruTrak Pictorial Pilot and altitude hold, Garmin Audio Panel and transponder, AF-2500 Engine Monitor and standard Airspeed Indicator, Altimeter and Vertical Speed Indicator. Empty weight is 1116 pounds.

We are looking forward to more flying and less building.

Thanks,
Mike and Arlene Dougherty

Collision Avoidance

Maybe the recent Mid-Air over Commencement Bay was the motivator; we have a couple members looking at the Zaon PCAS and reaching for their wallet. I won't name them or they might find Curt Bryan diving out of the sun to test their installation. So how does this gadget work?



The picture shows the Zaon PCAS XRX model. PCAS stands for Portable collision Avoidance System. The P could also stand for passive because it is receive only...it does not transmit any signals. It is made to be placed up on the glare shield so it can receive transponder signals sent from other aircraft. Those other aircraft are sending signals in response to interrogation by other sources (ground radar or airliner TCAS)...not the XRX, but the XRX "listens" for them and translates them into range, direction, and height info displayed in the XRX window. An audio alert is associated also.

Range info comes from the amplitude of the signal. The closer you are, the stronger the signal. Direction comes from the antenna array internal to the XRX and an internal mag compass...no external antennae required. Altitude (relative altitude) comes from the transponder mode C signal of the intruder compared to your own mode C, or the XRX built-in altimeter. It also shows whether the traffic is climbing or descending.

Range is selectable up to a max of 6 miles. Direction is accurate to plus or minus 45 degrees, altitude difference is selectable up to a max of 2500 feet.

The audio alert seems necessary but it doesn't tell you much, just the urgency of the situation. Audio goes to your headset via an adaptor cable but you could also hardwire it to your audio panel.

Power is taken from aircraft via cigar lighter adaptor. Like most avionics, there will be installation issues. The XRX needs an approximately 6" clear area around the antenna array with no obstructions to ensure the best sensitivity. This includes the magnetic compass, which must be at least 5" away from XRX for mutual calibration. This also includes the windscreen center pillar, GPS antennas, satellite weather antenna (especially those with a magnetic mount), etc. Adhering to this rule will avoid potential magnetic interference and provide the XRX antenna array with adequate reception.

Options: the XRX output can be displayed on many other cockpit displays like the Garmin 396/496, AnywhereMap, Blue Mountain, etc. Bluetooth is an option.

Limitations: XRX won't see an aircraft without an operating transponder. So abide by the FAR that says if you have one, you must have it on (including altitude) anytime you are in controlled airspace, which is almost all the time.

Price: \$1795. For all the details go to <http://www.zaon.aero/>

Other low cost units:

Monroy ATD-300 \$795

Zaon PCAS MRX \$549

To round out this article, let's look at some other collision avoidance equipment:

TCAS: Traffic Alert and Collision Avoidance System. This is what the airliners have, actually TCAS II. It is an active system in that does not depend on ground radar; it transmits on 1030 MHz and receives on 1090, same as ground radars. Transmit range is about 40 miles as opposed to 200 miles for ground radars. In addition to traffic alerts it also provides resolution advisories; it tells pilots to climb or descend to resolve the conflict if necessary. Way too expensive for most of us.

TIS: Traffic Information Service. This requires a mode S transponder like the Garmin GTX 330. You can receive TIS via the modes S datalink to FAA ground radar, including location, direction, altitude and climb/descent information of nearby aircraft. This information is displayed on your compatible panel mount GPS or other multifunction display.

Problem: The FAA provides TIS services through a network of 129 radar ground stations, which send traffic information in covered areas to Mode S transponders. The TIS information comes from ASR-7, 8 and 9 radar units. Over the next several years, the FAA is upgrading 22 of these radar ground stations to ASR-11 units, which will no longer support TIS. The 22 radar ground stations are scheduled to be replaced one by one between now and 2013.

TIS-B: Traffic Information Service-Broadcast. This ties in with ADS-B equipped aircraft. It uses satellite position information that is continually broadcast from each aircraft and used to alert these aircraft of potential collision. Ground radar ties in with position reports from secondary surveillance radar on non-ADS-B equipped aircraft. This is a work in progress. It was tested in Alaska when many users were provided the necessary equipment free of charge. Now it is undergoing operational evaluation in parts of eastern U.S. Not sure to what extent this has been implemented.

True or False

The glide path provided by a Visual Approach Slope Indicator (VASI), assures obstacle clearance on a 6-mile final.

Chapter 326 Staff

President	Jeffrey Liebman	253-531-6123	
Vice President	Robert Barra	253-988-2676	
Secretary	Andy Karmy	253-333-6695	
Treasurer	Norman Pauk	253-630-6396	
Newsletter Editor	John Brick	253-846-2617	jebrick@comcast.net
Photographer	Drew Karmy	253-333-6695	
Webmaster	Andy Karmy	253-333-6695	

Young Eagles Coordinator	Lance Newman	425-413-1764
Technical Counselor	Harold Smith	253-752-5480
Technical Counselor	Charlie Cotton	360-893-6719
Chapter Flight Advisor	Terry O'Brien	206-244-3619
Chapter Flight Advisor	Jim Triggs	360-438-1482
Chapter Flight Advisor	Marv Scott	253-691-5496
Program Coordinator	John Brick	253-846-2617
Biographer	Vacant	
Property Custodian	Vacant	

Chapter 326 Website <http://www.eaa326.org>

EAA Mount Rainier Chapter 326
C/O John Brick
8304 242nd St. E.
Graham, WA 98338