

WIND IN THE WIRES



The Newsletter of Chapter 26, Experimental Aircraft Association ❖ Seattle, Washington ❖ Volume IX No. 9 ❖ Sept. 2011

NEXT MEETING:

2nd Thursday of the Month
Sept. 8th, 2011
7:30 PM

LOCATION

Opportunity
Skyway Bldg.
6524 Ellis Ave S.,
Seattle WA 98109
(N.W. Corner of
Boeing Field)

Chapter Web Page

www.eaa26.org

SEPTEMBER MEETING

Program for September 2011:

John Lesh is part of a group of Boeing employees who are gathering hands on aircraft experience by building a Glassair. He will show pictures of the build and discuss this unusual project.



FUTURE EVENTS

Sept 20, 2011
[Lecture Details New Boeing Tanker Program](#)
Museum of Flight

Sept 24, 2011
[Smithsonian Museum Day](#)
Museum of Flight

Oct 1, 2011
[Wings and Wheels Festival](#)
East Wenatchee, WA, USA

www.museumofflight.org/calendar

2011 OFFICERS

President: Ron Bovec
425.488-8145
ronborovec@frontier.com

Vice Pres: Frank Bryant
425.226.1204
seacamel@hotmail.com

Secretary: Don Davis
425.822.3439

Treasurer: Tom Susor
206.632.1397
stsusor@msn.com

Newsletter
Editor: Tracy Hach
206.321.3041
tracyh@northern-lights.com

Web Editor: Tom Osmundson
253.239.6175
dieselfume@dieselfume.com



PRESIDENT'S MESSAGE...

We are experts in the dream of flight. Not just flying, but a vision of how flying should be.

I was reminded of this as I read an article in the current issue of National Geographic. It struck me as a pretty strange piece as it was not written by an expert or even a pilot. It was the author's personal idea of personal flight. It is fair to say his vision included as little extra machine as possible. Out in the breeze or slipstream seemed to be his idea of an essential requirement.

His chronology of flight started with balloons, included gliders before the Wrights, of course the Wright brothers' glider and then became particularly heavy on one man hovering platforms and jetpacks. It progressed through hang gliders, paragliders, man-powered flight and also focused on winged skydivers. That is skydiving with a wingsuit, which include batlike wings. Hard to describe if you haven't seen one.

The ultimate expression, or at least the pictorial place of honor, was Yves Rossy's parachute jumper wing, the one with the four model jet engines attached. Rossy not only glides down, he is capable of sustained powered aerobatics and some cruise flight. The only controls, besides throttles, are the aerodynamic surfaces of his body. Simple in a way, but a very complex way to get close to true flight.

I thought a lot of those machines, particularly the jetpack stuff, was a pretty silly way to fly. Then I realized I was facing a genuine beyond the ordinary experience. That is to say, seeing flight through the eyes of someone really new and fresh, but who still had the dream.

It is hard to step outside of your own experience. I know. I have dreamed of flying well over 50 years. But I went much beyond that. I flew and got my Private Pilot's license and started working and studying the engineering side of aviation. It is fair to say I dream, but my dreams are well encased in a thick coating of practicality. I am quite aware of what it takes to fly successfully and generally adjust my dreams accordingly.

I have seen this dream-vision thing before. I have been around the subject of roadable aircraft – flying cars for twenty years or so, ever since publishing Roadable Aircraft Magazine for about three years. I approached the subject with an engineer's eye, but I saw plenty of people who were driven by a vision. A vision of driving and flying the same machine, and a vision not always well grounded in reality. But they definitely had a dream.

I knew someone who was a world class paraglider flier. That is a sport with a very strong experience of flying. Just you, your chute and the wind, or something like that. He had even become a private pilot. He said flying a plane was very boring, nothing like paragliding at all. He had a different vision.

I took a motorcycle training course several years ago. It was fun. Observing the other students was also very interesting. There is something about motorcycles and airplanes that brings out the passion in people. A few of those students fell off their cycles one too many times and could not pass the course that week. They were crushed, or at least really upset. It was personal. They had a dream.

There are so many ways to express the dream of flight. From a Cessna 172, to a Falco, to an ultralight airplane or a hang glider. A well to do aviator can look out and say, "What can I buy?" They can buy whatever is available. The experimenter and builder have more work in front of them, but more room for their own vision.

Anyway, come to the meeting and talk about whatever interests you.

Ron Bovec



Rendering of the Carplane showing it in flying and driving configurations
HCarpplane Developers Criticize BiPod.....and Burt responds

Steve Schapiro, Senior Editor, *Sport Aviation*

August 11, 2011 – In response to our [story in AirVenture Today](#) about Scaled Composites Model 367 BiPod, a German government-sponsored aviation firm, Carplane GmbH, provided its analysis of the latest Burt Rutan design. The Carplane is a competing roadable aircraft being developed at the Research Airport in Braunschweig, Lower Saxony, Germany. The study's main question is about the storage of the BiPod's wings, as it relates to ground clearance and the impact on road-mode aerodynamics. The analysis argues the BiPod in driving configuration would have significant frontal wind resistance, and in flying configuration, it calls the aircraft "too slippery," saying its 197-mph cruise speed would "eliminate many hobby-flyers" since it would not meet LSA airspeed restrictions.

When asked for his thoughts on the Carplane analysis, Burt said, "I am breaking my rule here by paying any attention to his analysis - I usually have a rule to comment only on things that are flying, not someone's untested concept."

Burt said the analysis made "many wrong observations based on poor measurements of photos or graphics," adding, "Gee, he complains that we have too much drag as a car but not enough drag as an airplane!"

The Carplane has a twin fuselage similar to Rutan's Bipod, and its automatic wing extension system that the company claims will convert between modes in 15 seconds is reminiscent of Terrafugia's Transition. According to Carplane's website, it has been under construction since 2008, and uses electric motors in driving mode and a piston engine for extended range and in flight.

To read Carplane's analysis and Burt's full response, log onto [EAA's new forums website](#). For more information, [click here](#).

UAV Transponder May Hold Promise

By [Mac McClellan](#), Editor-at-Large, EAA 747337

August 11, 2011 – Sagetech, a maker of electronics for unpiloted air vehicles (UAV), has built what is believed to be the world's smallest transponder. The XP transponder from Sagetech is about the size of a business card and weighs just 105 grams. The tiny unit even contains an altitude encoder. And the company is nearing production of an XP transponder with Mode S extended squitter (ES) that could potentially meet the rules for ADS-B out.

The electronic worlds of UAV and regular airplanes are beginning to merge with even industry giants like Rockwell Collins working in the UAV field. Many UAVs are very small and low on power, so there is a premium on compact and efficient avionics to operate them. That is what is driving Sagetech to create the tiny transponders. And that same technology could be a breakthrough for light general aviation airplanes. Sagetech has not yet announced prices for individual XP transponder purchases, and they do not yet have the certification that would allow the transponder to be installed in a manned airplane, but the company does promise a low price.

The ES function of the XP Mode S transponder is what holds promise for possible ADS-B approval. The ES portion of the transponder transmission can contain the position and velocity data needed to satisfy ADS-B out rules.

However, ADS-B is a complete system that combines the transponder with an approvable position source - almost certainly a WAAS-enabled GPS - and the FAA will only approve an entire system for a particular airplane. So far no equipment has full ADS-B out approval so it's too early to say exactly what will comply with the rules, but having a transponder with ES is a crucial step on the path to meeting the ADS-B out requirement for 2020.

For more information on Sagetech and its incredibly small XP transponders, [click here](#).



Interesting web links from Frank Bryant

<http://www.wimp.com/robotbird/>

<http://www.twaseniorsclub.org/Oshkosh.html> awesome 4 minute video of Oshkosh 2011

Below, you will find a great test stand video of the Pratt & Whitney 4360 Wasp engine introduced in 1944. Basically, the engine was 28-cylinder four-row air cooled radial engine. Each row of pistons was slightly offset from the previous, forming a semi-helical arrangement to facilitate efficient airflow cooling of the successive rows of cylinders, with the spiraled cylinder setup inspiring the engine's "corncob" nickname. A mechanical [supercharger](#) geared at 6.374:1 ratio to engine speed provided forced induction, while the [propeller](#) was geared at 0.375:1 so that the tips did not reach inefficient [supersonic](#) speeds. Initially, it developed 3,000 horsepower, later models gave 3,500 horsepower.

The 4360 powered the B-50, successor to the B-29 and later the B-36, to name a few. And although reliable in flight, the Wasp Major was maintenance-intensive. Improper starting technique could foul all 56 [spark plugs](#), which would require hours to clean or replace. As with most piston aircraft engines of the era, the [time between overhauls](#) of the Wasp Major was about 600 hours when used in commercial service.

Why am I sending this to you? Because it looks and sounds neat. That's all. Just a test stand video of a newly restored engine. But turn the speakers all the way up. Bask in the roar of twenty-eight cylinders belching the sound of freedom. Also, the sound will most likely clear out the cat, your wife and any other extemporaneous people not accustomed to military sounds and the glorious roar of a Pratt & Whitney "round" engine. As the Warbird people say, "Jets are for kids."

[Click here: Pratt & Whitney R-4360-20 first start on Vimeo](#)

Smithsonian Museum Day

Saturday, September 24, 2011 - 10:00am - 5:00pm
Museum Day is an annual event hosted by Smithsonian Media in which participating museums across the country open their doors for free to anyone presenting a Museum Day Ticket. As a Smithsonian Affiliate, The Museum of Flight honors Museum Day Tickets for free admission to the Museum on Sept. 24.

The Museum Day Ticket is available to download at www.smithsonian.com/museumday. Visitors who present the official pass will gain free admission for two people to participating museums and cultural venues. One ticket is permitted per household, per email address. Listings and links to participating museums' and sponsors' sites can be found at www.smithsonian.com/museumday.

News from National  From www.eaa.org



LONGTIME EAAER REGRETS TFR INCURSION

Several times a week, Myrt Rose, EAA 810977/Vintage 719607, flies her award-winning vintage 1941 Piper J-3 Cub low and slow around the patch near her South Barrington, Illinois, home. But the flight she took on August 3 is one she never should have made. Myrt, who had just returned from her annual journey to EAA AirVenture Oshkosh, had not flown her Cub in a week. She usually checks the NOTAMS online before flying, but this day she said she couldn't log on. [Read more](#)

Recent Homebuilt Accidents from the NTSB Web Page September 2011, Submitted by Ron Wanttaja

Sonex – Florida: The pilot entered the traffic pattern for landing, completed all required checklist items, and made a visual approach to the grass area adjacent to the runway. He flared the airplane high and the airplane touched down hard. As a result of the hard landing, the left main landing gear separated and the airplane nosed over inverted.

Glastar - Idaho: The pilot had been landing and departing from the grass strip numerous times earlier in the day. For the accident flight, he was attempting to perform a midfield takeoff. During the departure roll, the airplane momentarily became airborne and then settled back into the wet grass and slowed. He opted to immediately abort the takeoff by retarding the throttle control and applying brakes. The airplane then slid off the end of the grass strip and collided with a ditch.

Zenair 601XL - Kentucky: During his return to his home airport, the pilot noticed that the single fuel gauge, which only indicated fuel quantity from the selected tank, indicated less than one quarter tank of fuel remaining in the left tank. He then selected the right tank to supply the engine. The engine operated normally for less than a minute before beginning to sputter. He immediately switched back to the left fuel tank, turned on the electric fuel pump, and applied carburetor heat. The engine regained power and the airplane began to climb, but the engine subsequently experienced a total loss of power. The airplane performed a forced landing to a grassy hill, incurring substantial damage. At the time of the airplane's wreckage recovery, no fuel was noted in the left tank and about eight gallons of fuel was drained from the right fuel tank; there was no breach of fuel lines or fuel tanks. The fuel strainer contained fuel; however, there was no fuel at the fuel selector valve located in the cockpit or in fuel lines from the fuel strainer to the engine. The pilot opined that the engine lost power due to the left tank becoming exhausted of fuel, which introduced air into the fuel supply system. A subsequent ground test indicated that with the electric pump on, the supply system should have been purged of air in about three seconds.

Hornet - Arizona: During cruise flight, the engine made a sound akin to a "buzz saw" that required the pilot to initiate a forced landing to a nearby field. During the landing roll the nose wheel separated and the pusher-type engine separated from the mount assembly, impacting into the cockpit area.

.A post accident examination of the airplane revealed that the exhaust clamps had separated from the support structure while in-flight. A section of the exhaust system then struck the wooden propeller blades. Examination of the airplane by a Federal Aviation Administration inspector revealed the both wooden propeller blades had been sheared approximately six inches outboard of the blade root. Seven of the eight engine mount bolts were sheared at the adapter plate and the eighth bolt was missing.

Piel Diamant - Utah: While on a cross country flight the pilot recognized that he had been using the wrong road to navigate to his destination. He decided to turn around and return to the departure airport. The pilot was concerned with the approaching night and decreasing light condition. As the amount of light continued to decrease he elected to make a precautionary landing on a road prior to reaching the departure airport. Either during the landing or taxi the underside of the wing was damaged by contact with a road marker. Further damage to the wing caused by contacting additional road markers occurred when the pilot taxied off the road to park the airplane and again when repositioning the airplane.

Hula Girl Motorglider – Colorado: The pilot, who was also the designer and builder, was making his second flight after having completed a number of high-speed taxi tests. Several months earlier, on the first flight in the motor glider, the engine experienced a partial loss of power shortly after takeoff and the pilot landed immediately. On the accident flight, immediately after takeoff, the pusher-configuration engine again lost power from 6,500 rpm to approximately 4,300 rpm. The pilot was not able to climb and was able to maintain flight at only 100 feet above ground level. Approximately one mile from the airport the pilot attempted an off-field emergency landing and then "did an intentional ground loop" to avoid a fence he had not noticed before touchdown. The pilot reported that there was adequate fuel in the tank and previous testing showed there was adequate fuel flow to the engine. After the accident the pilot reported that that his design of the engine cowling needed to be modified and he thought that "an engine compartment pressure differential from outside air caused the carburetor float bowl to empty."

On the Wreckord, continued

Recent Homebuilt Accidents from the NTSB Web Page September 2011, Submitted by Ron Wanttaja

Savannah - South Dakota: The pilot applied right aileron to correct for a 9-knot crosswind during takeoff. The airplane encountered a gust of wind just after liftoff about 5 feet above the runway. The pilot stated that he "over-reacted" in applying right aileron and lowering the nose of the aircraft. The airplane drifted off the left side of the runway, where it descended into 30- to 36-inch-tall grass. The right wing tip contacted the ground followed by the rest of the airplane, causing substantial damage to the right wing.

Zenair 701 - Arizona: After departure, the airplane climbed to 2,000 feet AGL. The pilot stated that the engine was running smoothly, producing full power, and he noted no anomalies. He then descended to 1,000 feet under cruise power, and after completing a turn, the engine had an immediate loss of power. It began to vibrate significantly and subsequently lost total power. The airplane collided with a tree during a forced landing on a road. Postaccident examination of the engine revealed that the spark plug in the right rear cylinder was fractured and separated in the porcelain area of the plug. The spark plug base remained screwed into the cylinder, and it was more than finger tight. The remainder of the plug was in the ignition harness's rubber boot. There was no indication that the spark plug fractured due to impact damage. The spark plug was then replaced and the engine started with no anomalies noted. The engine had accumulated 4 hours since being installed on the airplane.

Marketplace

I have a C90-8F engine for sale that would make a good core for a rebuild. I believe prices for these can vary from somewhere around \$2000 to about \$4000. This engine was originally purchased from Gibson Aviation in El Reno, OK. The engine is one of many that Gibson purchased from the French military where they were used in early PA-18's. The engine has complete logs, in French, along with notes from Gibson. The 8F version of the C90 has a flanged prop hub and is hand started. It does have the original Bendix mags and a Marvel Schebler carb. According to the overhaul manual in the link below, this engine is approved for installation of Slick mags. Internal specs, bore & stroke, are identical to the Continental O-200. Operational Times:

Total time: 1805 hours (based on French military logbook) SMOH 999 hours, Gibson's notes indicate it may have had a top overhaul

For further information contact: Chuck Cerar EAA #14440, 425 392-1821 cerars@mindspring.com

Reference: On-Line Manual <http://www.pj260.com/Continental/O-200%20Manual.pdf>

I am selling a project 1948 Stinson 108-3, located in my hangar at Richland, WA (KRLD). It is freshly powdercoated (high-zinc primer, iron phosphate rinse, white topcoat, etc), and has a heavy-case 165 hp Franklin with good prop, spare wings, lots of spare parts, clean paperwork, about 300

SMOH and 2700 TTAF; came from Arizona, was idle for 20+ years. On the trailer. Asking \$10,000 or trade for decent Taylorcraft BC-12D.

please post at clubhouse, put in newsletter, or announce at club meeting. I have lots of pictures that I can email. thanks!

Steve Fribley EAA 243340, (206) 234-1306 seaplanecfi@yahoo.com

I am trying to help my son out with selling his father's Corby Starlet which is located in a storage building in Anacortes, WA. We are going to take pictures of it tomorrow, but we don't believe there are plans or paperwork with it. It has been kept safe and dry. It has an engine and is partially assembled. If you have any information about anyone who may be interested, would you please let us know? It has to be sold soon! Thanks alot. Ginny Matheson Kirkland, WA (707) 483-3266. P.S. I know it was purchased in Texas about 6 years ago and trailered up to Anacortes.

Marketplace

Thorp T-18. O-290-D2 135 hp, In annual, First Flight 1993, Cruise speed 160 mph Stall speed 62 mph 2 place, Empty weight 920 lb, Gross weight 1500 lb, Electrical System \$25,000 Ed Ullrich his phone number is 206 878-3062. The aircraft is hangared at Auburn.

Metal Hangar for sale: Pierce County Airport (Thun Field). 45x50, 45x14 electric bifold door. Heated and insulated, has separate bathroom. \$155k. Contact Gene Endsley, 206-300-1197

RV-10 Tail Section for sale: 95% complete). Skip Feher 425 677-5335

Condo T-Hangar at Olympia Regional Airport, Washington for sale. Hangar Number I-5, 1620 Sq. Ft., 44 ft 4" wide door opening - electrically operated bifold door. Two years old with epoxy sealed floor. 110/ 240 volt , 60 amp electrical service on separate meter. \$89,500. Mike and Arlene Dougherty, 253-880-6690.

Zenair 601 HDS Project for sale: Firewall back, including fairings, LR fuel tanks, and lights. Price negotiable. Terry Wilson, 206 522-4006.

Former EAA member Keith Klinck recently passed away and his wife Helen has his Smyth Sidewinder project up for sale. This is a 1960's vintage design, all metal, tricycle gear configuration somewhat similar to an RV-6. The project has a completed fuselage and many other component parts and aluminum sheet. For more information call Ron Klinck at 425.739.0715.

For sale: Tires – 15/6.00-5, 6ply, 2 tires, 2 tubes. Brand new, unused, with yellow tag. These are retread tires that are heavier duty than standard – With deeper treads and harder rubber they'll last longer than new. \$125 for the set. Ross Mahon 206.550.9526 or Rossair@aol.com

*Wanted: Partner(s) in building Experimental Twin * Looking for 1 or 2 partners for building a one of a kind, partially complete, experimental light twin - Wickham Model F. Similar to Partenavia P68. Aluminum, 6 place, est 2100 empty, 3600 gross, fixed mains, retractable nose wheel. Engines could be 150 to 180 hp. Evolution of Wickham Model B twin based at Paine. No small project, if seriously interested, contact Tom Osmundson, 253-239-6175 dieselfume@dieselfume.com

THORP T/S-18 KIT & ENGINE • \$14,000 • THORP T/S-18 KIT & Lyc O290D "0"- SMOH (mo-gas compatible), X-over exhaust,/PS 68"d x 66"p prop. Avionics: Terra – com, nav, obs, txp. Finished: V stab, rudder, stabilator, flaps, ailerons. Wide body fuselage w/gas tank & engine mount. Materials to finish. Tacoma, WA Narrows Airport. Tom Worth – 253-576-2730

1992 **THORP T-18** – N295RS - \$40,000 • 350hrs SMOH Lyc O320 engine. Garmin – gps/nav/com 430WAAS, cdi, txp. Fly two x-country @185 mph on 7 gph (2x – USA). Tacoma, WA Narrows Airport. Tom Worth – 253-576-2730

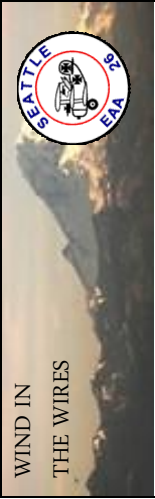
READY FOR LICENSE •FOR SALE BY BUILDER • In hangar at Santa Monica (CA) airport. Has had first EAA inspection. Lycoming O-290 (0 hours since major engine). 2 place side by side. Upgrades on many of the avionics. History of project documented by photos available on Facebook at "Become a Fan of Morie's Plane". Or use <http://www.facebook.com/pages/Become-a-fan-of-Mories-plane/335062068273> • For more information contact [Adrienne Kramer](mailto:Adrienne.Kramer) Owner - located Santa Monica, CA USA • Telephone: 213 300 3097 • Fax: 310 395 4860

NEWSLETTER



Chapter 26
EXPERIMENTAL AIRCRAFT ASSOCIATION
17845 24th Ave
Shoreline, WA 98155

WIND IN
THE WIRES



The Newsletter of EAA Chapter 26

