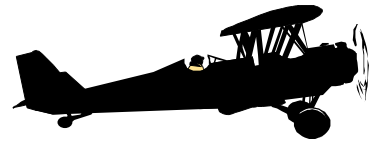


Frederick Flyer

June 2007



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Message from the President

AOPA Fly-In and Frederick Airport Appreciation Day will be held on Saturday, June 2. The Chapter will once again be planning a number of events to coincide with these activities.

- We will have a food stand at the entrance to the runway at the main building. We will be selling hotdogs, cold drinks and chips.
- The chapter will manage the tie down area for experimental, antique and classic aircraft.
- We will have the Aviation Education Center open to greet visitors, provide information about EAA and answer questions. Coffee and donuts will be provided to visitors
- The Board talked about organizing some kind of hands on event (sheet metal, fabric covering, etc.) and we thought that we could sell t-shirts and some of the aircraft parts that we have in the Education Center.



We will need help with these activities. If members can give us an hour or two of their time I think we can manage all these activities and we can all still break away and go enjoy the various events that will be taking place. Besides you will be able to enjoy the best hotdogs on the grounds at the lowest prices. What more could you ask for.....

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Gust

The Frederick Flyer is the monthly newsletter of Chapter 524 of the Experimental Aircraft Association. Meetings are held at 7:30 on the first Thursday of each month (excluding March, July & August) at the Chapter 524 Aviation Education Center, located at the Frederick Municipal Airport, Frederick, Maryland. The AEC is the hangar located nearest Frederick Flight Center. Visitors are always welcome. Chapter membership dues are \$20.00 per year (\$30.00 for family membership). It is EAA policy that all chapter members hold active EAA membership.



Chapter History

It was Twenty Years Ago Today... From the EAA 524 Archives

By John Baker

From the June 1987 *Frederick Flyer*

"Next Meeting – Thursday June 4, 1987, 7:30 P.M. at the Frederick Community College Aviation Technology Hangar at Frederick Airport."

Most EAA members will at one time or another face the decision whether to build and if so, what to build. Certainly, for those new to EAA, the excitement of homebuilt aircraft can lead one to want to get started with the project in a hurry. But the decision on what to build is not one that should be made with haste. To be sure, any decision you make will be one you will have to live with, possibly for a long time in the future.

Making the decision on a project will be the topic of our June meeting. You will hear from a panel of chapter members including Tom Proctor, Chic Chaconas, Herb Jones, Neil Wright, Jack Roberts and John Baker – members who have decided on a project. They will discuss the factors influencing their choice and what, with a little hindsight, they might have done differently. We'll also open the program to the general membership, and builders around the room can tell why they're building what they're building.

For those of you new to homebuilding, you won't want to miss the advice of the old hands. And for those of you who have been around awhile and are into the twelfth year of building on your "Super Acro Moonduster III", you can hear comforting tales of how your fellow builders got into such a mess.

And since we're on the topic of different designs, this will be a good time for everyone to bring in any new aircraft plans or blueprints you may have, as well as pieces or components from your projects."

Also in the June 1987 newsletter:

- Newsletter editor John Baker described several local fly-ins he attended with his Stinson, including the EAA fly-in at Winchester and the Potomac Antique Aero Squadron event at Horn Point.
- Jack Roberts flew his RV-3 to the Winchester Fly-In. Jack found a Glasair owner there who had never rolled his plane, so Jack took the Glasair up to show him how it was done.
- Neil Wright flew his classic Bonanza to the Horn Point Fly-In.
- John Beers had begun taxi tests on his Bakeng Deuce.
- We welcomed new member Dave Liston, who was just starting the tail feathers of an RV-4 project.

From the EAA 524 Photo Archives:



What a girl! John Baker enlists wife Sukey to varnish the wings on his Acro Sport II project in the townhouse basement, circa 1983.



Chapter Board Meeting - May

- Gust Mitchell called the meeting to order at 6:10. Present were Gust, Kris and Tom Crone, Jerry Blake, Tom Proctor, Dave Liston, Dean Stickell, and Jack Fromm.
- Young Eagles – Dean reported that he had been contacted by the Scoutmaster from the last YE event and he thought it was so successful, he was inquiring about doing another one. Dean asked for more feedback on what we should do, if anything, about the new wording on the brochures. The consensus was that this might be a good test to see if there was the anticipated negative reaction to it from the parents. Gust then asked a more general question of whether we thought the Young Eagles program produced enough benefits to be worthwhile continuing. Dean replied that he thought if only one kid in a thousand pursued aviation because of it, then it was worth it. Jerry said he had positive evidence that we had already achieved that. He told of meeting a mother whose son had attended one of our YE events several years ago and was now about to get an aviation-related degree that he said he decided to pursue based on his YE experience. That pretty much clinched it for the board. Dean proposed July 7 or 14 as possible dates for the next event.
- Gust said Chris Burkhardt was hoping to publish the newsletter early so it would be out in plenty of time for the AOPA open house and he encouraged everyone to get his submissions to Chris by this weekend. Chris was also wondering how many flyers needed to be printed for the event. The decision was 25.
- AOPA Open House, June 2 – Kris and Tom reported that they were all ready for the food concession. They had already gotten the permit from the health inspector. Same menu as last year but the price for a hot dog, chips and soda will be \$3.00. Tom Proctor suggested we have Pitts tail section on hand for demonstrating fabric covering. He thought that a show-and-tell would be a good draw. Gust agreed and also mentioned that we hope to have some members bring their project planes down to a 'homebuilt corral' to be on display. Gust is going to get some balloons and flags.
- June membership meeting program – We're just going to wing it.
- Turbulent – Doug Kelly has reported that we have a firm offer for the airplane from Jack Dueck (the instructor who taught the most recent Sportair workshop). He plans to take the plane to Canada. That means we have two issues to deal with; 1) de-registering the airplane and, 2) disassembling it for transporting. Jerry suggested that we start working on the registration issues as soon as possible since they can be tricky. Gust reminded us that Jack Savage has offered to do the legwork if he can get the N number. Gust will check with him. It was agreed that we would provide whatever manpower was necessary to disassemble the airplane if Mr. Dueck does agree to purchase it.
- Gust said he has seen a sink in a local hardware store for \$39 and asked for a vote on whether we should just get it and install it in the AEC. The board agreed.
- Jerry reported that he recently attended a class reunion hosted in the AEC and the attendees took up a collection and donated \$120 to the Chapter.
- The meeting was adjourned at 7:05 and we retired to the parking lot to admire the Krone's new ride.

Jack Fromm, Secretary



Chapter Flying Club Minutes - May

Bob Garver called the meeting to order at 6:30 p.m. Jerry Blake, Gene Bywater, Bob Garver, Dennis Miller, and Pete Sweeney (and friend who drove him), were present as well as guests Mark Gosselin and Doug Kelley.

The meeting was preceded by a Ledo's pizza and Costco chocolate chip cookie feast. Father Sweeney had just had a hernia operation three days before and was doing great. The dinner conversation was one great hernia operation story swap where only one of the participants had not yet been so blessed.

MINUTES: The minutes were delayed and we never did get around to reviewing them.

PROGRAM: Mark Gosselin made an enlightening presentation on his project in constructing his Zodiac HDS. He presented the documentation and photos and showed us how the plane had evolved over the 6 years that he took to build it. He is quite pleased with its easy handling and good efficiency. There seem to be no hard parts to build - no hidden unresolved problems. He gives the aeronautical engineer who does the designing high praise. This appears to be the leading candidate for practicality and performance in building an LSA. He has graciously offered to take us up for rides in it when the weather is favorable.



Zodiac used for flight training. Zenair Website

LEGAL ISSUES: **Gene Bywater** continues to follow through on establishing a bank account for us. The banks now require legal incorporation with defined tax status to open an account. He is following through with a lawyer in our chapter who has volunteered to lead him through the steps.

ACQUISITION PROGRESS: We were hoping to move ahead at this meeting to authorize purchasing the tail assembly kit. But if two of the six members who have paid in do not want to participate if the "wrong" engine is purchased, then the remaining 4 will have to be able to afford the larger share of the kit and engine. Our highest priority now should be in resolving the engine selection problem. And it is going to take the efforts of multiple participants.

ENGINES: The subject of engine selection continues to be a controversial topic. It has now come to our attention that Cesna is using the Rotax 912 for their LSA development. One of our chapter members at our sheet metal workshop mentioned to me that his former EAA chapter in Texas has 4 Zodiacs, each with a different engine, which included a Corvair, Continental, and Jabiru. We need to find the basis for their selection and find what they recommend based on the engine they selected. We should go to others if we can come up with them.

We also need to know TBO, cost to overhaul, time and process to overhaul, reliability and basis for figures derived and published. This may be such a big problem that EAA may have to derive standards in the specification of engines to obtain any reliable and objective information. But failing that, we may have to do a quick job ourselves.

The speaker at our banquet mentioned that she had to wait so long for take-off clearance under ADIZ that her air cooled aircraft engine was way out of range for taking off - a water cooled engine (912) would not have had the problem. Even with water cooling and speed reduction unit, the 912 weighs in at 180#, significantly lighter than the Continental.

We could move ahead if individuals would contact me and agree to some aggressive data gathering. It would be nice if we could get some data for our next meeting.

NEXT MEETING: April 6:30 p.m. April 5, 2007, one hour prior to our EAA chapter meeting. We continue to be moving ahead smoothly and wisely thanks to your efforts.

Bob Garver, Chairman



My Search for a Fuel Efficient Aircraft

I don't have to remind anyone that gasoline prices are at a historic high, avgas is even higher. Unfortunately, most aircraft still burn more than 5 gallons per hour. Granted, many of them do this while going really fast. I'm more interested in the slower aircraft with cruise speeds closer to 100 kts.

My ideal aircraft would meet the following criteria:

- Cruise a 3 gph
- Cruise speed 80-100 kts
- Endurance 4.5 hours
- Two passengers seated side by side
- 50 pounds luggage
- Able to build on 4'x16' table
- Plans built for the fun of it

I also have two other considerations. The first is storage. The aircraft would have to be stored in a tie-down or enclosed trainer since there is no available hangar space in our area. Second, the aircraft would have to be IFR equipped since with the mid-atlantic summer comes haze.

My research has turned up some interesting aircraft that are close to my requirements:

Piuma Twin

<http://www.schio.it/piuma/twin/twining.html>

This is a two place motorglider powered by a 50hp engine. Its cruise speed is 80 kts. Fuel capacity is 11 gallons, so a Simonini Victor 1 engine at 1.8 gph would result in an endurance of 6 hours giving a range of 480 nautical miles.

I did purchase plans for this aircraft. They're very detailed, easy to follow. The only issue is finding a source for the tail boom. It's 5" .056 6005-T16 aluminum. Not the easiest size around. It also does not have a great deal of baggage space, although there is a plan update for wing tanks and a four piece wing.



Sonex Xenos

<http://www.sonexaircraft.com/aircraft/xenos.html>

The Xenos (Sonex backwards) is also a two place motorglider. It's metal construction would allow for outside storage. It's cruise speed is 90kts with a range of 350 nautical miles on 16 gallons of fuel using the AeroVee 80 hp engine. This makes for a fuel consumption of 4 gallons per hour. Baggage capacity is 40 pounds.

Falconar F-11 Sporty

<http://www.falconaravia.com/>

The F-11 is a variant on the Jodel D-II. There are two versions that vary based on engine selection. Using the Little Demon VW conversion, the F11 will burn 3 gallons per hour providing a 5.7 hour endurance for a range of 485 nautical miles at a cruise speed of 87kts.

This uses wood construction. The plans are very detailed. Machined parts, like landing gear, are available.





My Search for a Fuel Efficient Aircraft - Continued

Vans RV 6

<http://www.vansaircraft.com/public/rv-6int.htm>

Everybody knows the Vans line of aircraft. The RV 6 is their first side by side two place. While it burns a whopping 6.6 gallons per hour at 55% power, it does this while going really fast by my standards, 145 kts. The endurance for the RV 6 is 5.6 hours with a range of 825 nautical miles

The RV is only available as a kit.



Zenair Zodiac XL

<http://www.zenithair.com/zodiac/xl/>

The zodiac is our flying club's choice. It is offered as a kit or plans. With the Jabiru 3300 engine it burns 5 gallons per hour while cruising at 139 kts. This is almost as fast as the Vans RV-6. It's endurance is 4.9 hours for a range of 570 nautical miles.

Let's compare the fuel efficiency of these designs in terms of nautical miles per gallon. I calculated this by dividing range by fuel capacity. Range can be calculated as fuel capacity divided by fuel burn times cruise speed. The following table lists each model and it's fuel economy.

	Piuma Twin	Sonex Xenos	Falconar F-11	Vans RV 6	Zenair Zodiac XL
Cruise Speed	80 kts	90 kts	87 kts	145 kts	139 kts
Endurance	6 hrs	4 hrs	5.7 hrs	5.7 hrs	4.8 hrs
Range	480 nm	350 nm	485 nm	825 nm	570 nm
Fuel Burn	1.8 gph	4 gph	3 gph	6.6 gph	5 gph
Fuel Capacity	11 gal	16 gal	17 gal	38 gal	24 gal
Fuel Economy	43.6 nm/g	22.5 nm/g	28.5 nm/g	21.9 nm/g	27.8 nm/g

Not surprisingly, the Piuma Twin with the smallest engine wins our fuel economy contest. The surprise is the Falconar F-11 comes in second place. This is an older design, too. If anyone is interested, I have plans for both the Piuma Twin and the Falconar F11.

Chris Burkhardt



Next Membership Meeting June 3rd

Next Chapter 524 meeting will be at the AEC
Thursday June 7rd at 7:30.

Flying Club Meeting at 6:30.



Club Draine still for sale

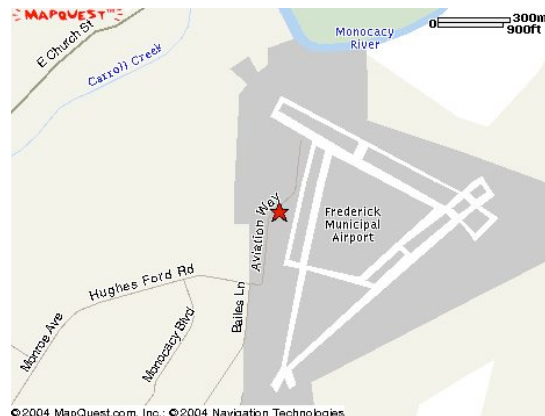
Calendar of Events 2006-2007

June 7	Membership Meeting 7:30pm	Jul 23-29	AirVenture Oshkosh
June 7	Flying Club Meeting 6:30pm	Late August	SportAir Electrical Systems Workshop
June 21	Board Meeting, Airport Cafe 6:30	Sep 7,8,9	LSA Inspection Workshop
Jun 2	AOPA Open House	Oct 2 or 9	Frederick Aviation Expo
Jun 16 or 23	SportAir Fabric Covering Workshop	Nov 2,3,4	LSA Inspection Workshop

Meeting Location

Chapter 524 meets at the Aviation Education Center which is located at the Frederick Municipal Airport. The building is an end hangar located to the right of the terminal building and the airport's flight school in a row of hangar buildings. Parking is available in the main parking lot in front of the terminal building and you can walk through the gates on either end of the flight school to our facility.

<http://www.angelfire.com/space/ea524/meeting.html>



Email Discussion Group

Our chapter has an e-mail discussion group hosted by Yahoo groups. This is a moderated group so we do not get spam. About a third of the chapter participates. Chapter members are eligible for membership by joining at:

<http://groups.yahoo.com/group/ea524/>

EAA Chapter 524 Membership Registration

This form is to be used each year for application for membership, providing information for receipt of email and newsletters, and for verification of dues payment. Please complete Sections I and III. Keep Section III for your records (this and your cancelled check will serve as your receipt). Return Sections I and II to the chapter treasurer with your payment. Make your check payable to EAA Chapter 524 and mail to Doug Kelly, 5617 Griffith Farm Road, Derwood MD 20855 . The treasurer will register your membership and forward appropriate information to the newsletter editor. For further information call Doug at 310-963-2217 or email at mulligan32@verizon.net

Last Name _____ First Name _____

Other name(s) if Family Membership _____

EAA Membership Number _____ Phone Number () _____

Address _____

City _____ State _____ Zip _____

E-mail Address (for receiving notices & Newsletter) _____

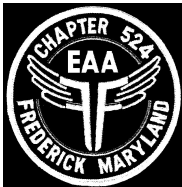
Are you able to receive your newsletter by either e-mail or through the web? Yes ___ No ___

Aircraft/Projects/Interests _____

Dues: Individual Membership: \$ 20.00 _____

Family Membership: \$ 30.00 _____

Date _____ Dues paid for fiscal year(s) _____



The Frederick Flyer
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