

Hendricks County EAA Chapter 1311

Monthly Newsletter — January, 2004

From the Chapter President

By Tim LeBaron

Ever wonder what you will be doing next January? Normally I don't give it a lot of thought but this New Years I sure have. Since resigning from Vincennes University and courting the NTSB it makes me a little nervous sometimes being stuck so far out on a limb. John Maxwell wrote "Every worthwhile accomplishment has a price tag attached to it. The question is always whether you are willing to pay the price to attain it in hard work, sacrifice, patience, faith, and endurance." Maybe your worthwhile accomplishment would be to build that airplane you have dreamed of, or maybe finish the one you have started, or perhaps to get that extra rating. Maxwell goes on to say that "you will never change your life until you change something you do daily. The secret of your success is found in your daily routine." I don't know where I will be next January. I may still live in the same house and still not have a job, but at least I'm working on my dreams. How about you? A year from now you may have wished you had started today.

January's meeting

January's meeting was held at the Aviation Technology Center on Wednesday, January 7, 2004, starting shortly after 6:30 p.m. Following the Pledge of Allegiance the meeting was promptly brought to order by Chapter President Tim LeBaron.

IN ATTENDANCE: Signed in were Dave Clark, Steve Cuthbert, Troy Grover, Dale Gustafson, Steve Lathrop, Mike Laurenzano, Tim LeBaron, Glen Matejcek, Michael Mossman, Gary Reynolds, Larry Rush, Paul Vogel and Gary Zeller. If you were there but didn't sign in, let us know.

GUESTS: Signed in were Ed Briggeman, Tom Chapman, Erika LeBaron, Bob Wagner and Sam Zeller. We welcome all guests and encourage them to attend a meeting, and especially to join the chapter!

TREASURER'S REPORT: Outgoing treasurer Paul Vogel reported that \$1860 was in the checking account.

OLD BUSINESS: Mike Laurenzano, David Clark and Michael Mossman gave a brief report on the Chapter's 501c6 filing status.

NEW BUSINESS: Tim LeBaron presented the EAA's Chapter Service Award certificate and pins to Mike Laurenzano (vice president), Paul Vogel (treasurer), Tim LeBaron (president), Michael Mossman (secretary, newsletter editor, web page editor), plus Chuck Long (Young Eagles coordinator) and Glen David (tech counselor). LeBaron further recognized the other board members and fly-in committee for their successful efforts.

Mike Laurenzano mentioned that he owns a share in a car-hauling trailer that is the appropriate size to move airplanes.

Tim LeBaron called for volunteers to form the 2004 Fly-In Committee. Paul Vogel and David Clark joined the committee; other members are invited to join and participate. Tim asked that the committee set the dates for the fly-ins early so that we can get in the Sport Aviation magazine calendar. Gus Gustafson recommended coordinating with other chapters and aviation organizations so that our schedules don't conflict.

Tim LeBaron recommended that the chapter consider sponsoring a young person to an Oshkosh aviation camp or program. The

members discussed the costs and benefits. Michael Mossman recommended that the chapter discuss how to best use the monies that are collected. Tim then suggested that the chapter start a discussion of what direction the chapter should go.

DONATION RECEIVED: Chapter 1311 was recently given a partially built aircraft as a donation. The project will be sold with the proceeds going to the chapter.

50/50: No 50/50 drawing was conducted at this meeting.

TRIVIA QUESTION: Tim LeBaron posed the following carefully researched question; Who designed the Piper Pawnee? While awaiting an answer he volunteered this clue: This same person helped design the Piper Cherokee. Glen Matejcek offered the correct answer "Fred Wieck" and won a calendar illustrated with military aircraft photos.

MEETING BREAK: After the business portion of the meeting most of those present went to the "hangar" part of the Technology Center to see Gary Zeller's current project, a custom trailer for his Brantly helicopter. Zeller is converting a burned-out Airstream trailer into a mobile landing pad for his helicopter.

PROGRAM: Dave Clark talked and presented a slide show about his participation and subsequent trip in the "50 Flags to Kitty Hawk." See feature story at end of newsletter.

Welcome New Members

We have had many guests over the past few months and many people have expressed an interest in our organization. Look around and see if you have any friends, family members or acquaintance that are interested in aviation. Take the time to invite them as a guest to the next meeting. If you see somebody new, introduce yourself, welcome them, and invite them to sign up. Also consider volunteering for the Membership Committee.

Dues are Due!

EAA Chapter 1311's dues for 2004 are now due. Send your \$20 to the treasurer, Vern Sullenger, 1763 Ramsey Lane, Plainfield IN 46168 317-839-8728. Thanks!

Support Our Servicemen

Time Magazine was so impressed with the way that our military has conducted itself in the war in Iraq that it named the collective members of the U.S. military as its traditional "Man of the Year," using three representatives on its cover. We are especially honored that Lebanon Indiana's own Army SPC Billie Grimes was included as one of the three representatives in the cover photo. As we publicly thank Grimes for her efforts, let us also keep in our hearts, minds and prayers the hundreds of thousands of other American men and women in our military.

Be sure let the newsletter editor know if any of our members or their families have someone in the service, especially if they have been called up for active duty. We'd like to recognize them and thank them for representing us so honorably.

SERVICEMAN UPDATE: In December of 2002 Jim Griffin joined Chapter 1311. Shortly before the war with Iraq started Jim signed back up as a Major with the Marines and has been serving in Iraq. He had been receiving the newsletter via email but this past couple of months the emails to him have come back as undeliverable. If anyone knows how to contact Jim, or knows of his whereabouts or of any way to track him down, please contact the

Support Our Member Businesses

As a gesture of thanks to the members who donate their time, talent and materials to Chapter 1311's various activities, the board asked that members be able to advertise their normal business services on the website. We would like to post a list for your business, which can include business name, your name, phone number, what you do, etc. We won't be able to host a full-blown web site for you but we can link to your site if you already have one. We invite all members to see the business services page and patronize your fellow members' enterprises. Listing is free and limited to those who have been a member in good standing for at least one year. Contact Michael Mossman for more information.

Visit the business services page at
<http://www.eaa1311.org/services.html>

Aircraft Donated to Chapter

Chapter 1311 was recently given a partially built aircraft as a donation. The project, a "Cougar" aircraft, looks a lot like a Wittman Tailwind. It has a steel tube fuselage with the welding completed. The wooden wing has gotten wet sometime so it will need repairs or replacement.

Originally started by someone else, the project ended up in the hands of a fellow who is moving to North Carolina and has no way to complete it, move it or store it. He donated it to the Chapter with the hopes that someone will be able to finish it. Now stored in Paul Vogel and Dave Clark's hanger, the project will be sold with the proceeds going to the chapter. Contact any chapter officer if you would like to make an offer on the project, or contact Paul or Dave to see it.

We can't be sure if this is the same aircraft model, but the January 2004 edition of Kitplanes magazine had a listing for the Nesmith Cougar I by Acro Sport, Inc. Judging from the photo and stats it appears to be a lot like the Tailwind. They claim a top speed of 195, cruise of 135 with a Continental 85. Acceptable engines range from 65 to 125 h.p. Projected empty weight is 624 lbs, with a rated gross weight of 1250 lbs for the two-seat aircraft. Takeoff distance is 800 feet; stall speed is 53 mph, yielding a landing distance of 700 feet. All stats are gleaned from the magazine and cannot be guaranteed by the chapter or the magazine.

For more information on the Nesmith Cougar I contact Acro Sport, Inc., P.O. Box 462, Hales Corner, WI 53130, 1-414-529-2609

Thanks to Scott Schermerhorn for this generous donation.

Aircraft Builders Event Planned

Bloomington Chapter 650 is planning a March Extravaganza for kit and plans builders. Their plan is more than just a fly-in; the idea is to have as many different makes and models of amateur-built aircraft as possible, with tables, posters, plans, finished planes, photos and stats. The presenter(s) would be telling the visitors a little bit about their planes and of the known completed aircraft. Hopefully, they will also have stories about factory visits and photo books of their projects while in progress. The event will be held in the Wings of Indiana Hangar at BMG.

If you are in the fact-gathering stages and contemplating a new project, this event is for you. There will be many builders there to talk about their projects and answer questions. If you have completed a project and want to build support for your brand, they would like your participation, too. For anyone who just likes homebuilt aircraft this promises to be a fun-filled program.

To date the following presenters are scheduled to appear:

Dallas Benham (Harmon Rocket, Tailwind, and Tri-Pacer Ford conversion)

Mike Combs (Zenair 701, Bearhawk, Leagle Eagle)

Joe Crowe (Zenair 701)

Tex Frye (Starduster Too)

John Hamlin (Zenair 701)

Bob Jacobs (RV-10)

Michael Mossman (Zenair 601 HDS)

Benton Pittman (Quicksilver)

Jerry Reynolds (Bellair SE)

Lee Root (Starduster Too) and

Dan Shaffer (Zenair 601XL, Corvair Conversion)

John Steere & Larry Lux (BD-4)

Jay Sutphin (Flight Star)

Mike Wonder (RVs)

There is still space available for more makes and models of homebuilt aircraft. The event organizers would especially like to have a representative composite aircraft, any model.

Current plans are to have a ham 'n beans 'n cornbread lunch at 11 a.m. followed by a five-to-ten minute summary by each builder. Following the summaries the presenters will be manning the tables with whatever materials they have to illustrate their project.

For more information contact coordinator Mike Combs 812-825-5058 (home), 812-854-4730 (work) or email at combs_mike@crane.navy.mil.

Larry Rush Tackles Another RV

Chapter 1311 member Larry Rush writes that building one RV-6A was not enough of a challenge. After completing the RV-6A he attested to an emptiness that hit him after spending five-and-a-half years building an airplane. So in April 2003 he plunged headfirst into Randy McMinney's RV-8 project that got marooned when the United mechanic who was assisting him moved out of town. McMinney and the mechanic had most of the basic structure completed. Since Rush got involved they have finished the tail and rigged it; completed the wings; wired all of the electrical and avionics; got the airframe up on the gear; installed, wired and plumbed the IO-360 engine; installed the constant speed prop and spinner, and are currently working on the cowling (whew!). They are doing the majority of the building in Larry's home shop.

Larry says that the toughest part so far has been the cowling, but the canopy is not done yet. Like everyone else he has his apprehensions about tackling that large piece of expensive plastic. After that they should have no trouble rigging the wings and adding the fairings. By December 2003 they had a total of about 875 hours dedicated to the project. He expects to have it ready to paint by April of 2004.

When they are finished this 200 mph speed demon will feature no special modifications or deviations from the designer's plans. But it won't be an "off-the-shelf" airplane, either. Randy and Larry have incorporated a Dynon EFIS and ACS-2002 engine systems monitor into the near all-glass panel, as well as a stereo AM-FM CD player. Larry has ingeniously derived a way to panel-mount a portable Garmin 196 GPS using a custom-molded flush-mount composite "pocket" that secures the GPS with Velcro tape. The GPS is wired to the ship's power and to an outboard antenna with a neat, no-spaghetti installation.

Also included in the project is a pilot-controlled fire suppression system mounted in the forward baggage compartment. The 11-pound system is activated by two switches, one for engine compartment fires and the other for protecting the cabin area with a biodegradable fire retardant.

After building his RV-6A Larry commented that the stick grip control wiring was too complicated; if he had to do it again he would have done something much simpler. This time around he wired standard Mac button grips for trim control and push-to-talk; the flaps are operated by a switch on the left side of the panel.

McMinney started with a Van's Quick Built kit, qualifying under the 51% rule; only about 5% of the airplane is scratch built. So

far Larry estimates that Randy's parted company with \$75,000, with most of it going to Van's Aircraft, Aero Sport Power, Aircraft Spruce and Wick's.

Larry writes that the two of them have only needed minimal assistance from the factory, just one phone call. He cites as his experiences that have helped him to assist on this project as being an avionics tech in the Navy, HAM radio operator, tool and die making, 13 years as a manufacturing engineer at Allison Transmissions, and 14 years of doing supervised maintenance and annual inspections on his Piper Warrior. Oh yes, and don't forget the previously mentioned, meticulous RV-6A he built, N939LT.

Larry still finds time to get out and fly his RV-6A, accumulating about 125 hours on it to date; it's still fun to fly. Although he is instrument rated and has hundreds of hours of flying experience, his wife, Kaye, had not ridden in it until this October when they took a trip to French Lick for brunch. He thinks that she didn't like the word "EXPERIMENTAL" in large black letters on the side of the plane.

Yet Kaye truly earned her ride in the RV-6A. Larry said in the December 2001 newsletter story that she helped him rivet about three-fourths of the wings. When asked about what she thinks of the RV-8 he writes emphatically "ENCOURAGES ME!!"

Larry says that he absolutely would recommend the RV-8 to another builder. He writes "Yes, this is as much fun as the RV-6A I built and maybe more so!"

See photos of the project at <http://www.eaa1311.org/rushrv-8.html>. Also see December 2001 newsletter story http://www.eaa1311.org/newsletters/011201_newsletter.pdf

Custom Product Offered

Larry Rush fabricated a custom mount for flush panel mounting a Garmin CPS 196 for Randy McMinney's RV-8 in his home composite shop. Since the installation was successful, Larry has decided to offer this product to the general public. It's only \$75 and looks great. See <http://www.eaa1311.org/rushrv-8.html> for photo, which is the last one in the series. Contact Larry at K9HXT@msn.com or 317-272-2153 for more information.

Building Tip

While scratch building the canopy frame "hoops" from aluminum tube for my project I had a difficult time getting the bends in the curve and avoiding any kinks. The plans describe the coordinates for making a plywood form block, but unfortunately aluminum tube has too much "spring back." While it is possible to pull the tube to meet the block cleanly it straightens itself out a bit and never quite gets the proper shape.

In Tony Bingelis's "must-read" books he describes several ways to roll a little extra bend into a tube. I tried several of them but either was unable to get the proper curve or maybe got a little too much kink in the tube. I tried using the best of a bad lot. I attempted to fit the bubble canopy to the tube frame but was dissatisfied with the results; the plastic bubble would warp to fit the frame but the distortion was too obvious.

I thought about just buying the frames from the kit manufacturer but was in for another surprise. Had I bought the full kit I would have received pre-bent tubes, but as replacement parts they would have been shipped straight. I would have been in no better position than when I started. Now what?

One day walking through my employer's warehouse I noticed the nice, neat bends in the electrical work. I had an idea. Why not use an electrician's conduit bender? Sure, they bend only one radius, and you have to have a different bender for each size tube, but so what? It might work.

I went ahead and filled the tubes with fine sand to help keep them from collapsing. I sifted it to get rid of the sticks and cat poo but it was a bit too damp to flow freely. I made from trays from aluminum foil and dried the sand in the barbecue grill. A word of warning: heating up the sand stinks to high heaven. Katie asked

what I was doing so I told her I was cooking a "sand"wich. She didn't think I was very funny.

Once the sand was dried it made a great bending aid. No need to weld the ends shut; just close them just with generous amounts of duct tape. Tamp it down several times and keep adding sand until no more will go it, then close up the other end.

The canopy frame hoops need to be bent into a gentle curve and should remain in one geometric plane. My first one ended up a little too wavy. Next discovery: once you get some curve in the tube it wants to fall over so each subsequent bend is in a slightly different direction. Maybe it's only a degree or two but the errors add up. This is a job that is best suited to two people.

A better way to keep the tube in proper alignment is to draw a very straight line the long ways down the tube. I placed the 3/4-inch tube against a piece of 3/8-inch plywood and ran the length of the tube with a Sharpie pen. Next I marked a reference point on the high spot of the conduit bender to help keep the tube straight.

Mark the center of the tube and reference it to the center of the form block. I think that it is easiest to bend from the center then work your way on out. Mark the tube "left" and "right" and do likewise on your form block. If you have to flip things over it will be a lot easier to keep track of which side you are on.

Next, I made reference "tick" marks every 50 mm from the center of the tubes to the end and numbered the positions (you Yankees can use 2-inch increments if you prefer). That made it easier for me to know where to add more bend.

On my conduit bender the bend would occur about 125 mm from the hook end of the bender. I made each little bend with only about 1 or 2 degrees of curve then moved the bender about 25 mm toward the bend. After going the length of the tube I compared it to the form block. I didn't have enough curve yet but I was getting a very nice, smooth bend with no noticeable kinks or waviness. I went through it a couple more times and ended up with a pretty good hoop.

There is definitely a technique to forming with a tube bender; most of it is by feel. You need to be careful to not bend too much. I just tugged to get a little play then moved on to the next mark. It is far easier to add more bend than to take some out. Once or twice I got in a bit too much bend but I was able to straighten it out by hand.

Total time to bend the tube, including setup and practice: about one hour. On a project with several tubes you could knock this time in half or more.

But what if your project takes tube sizes other than 3/4-inch? Let's say you need to bend a 5/8-inch tube and don't have that size conduit bender. Get a scrap of 3/4-inch tube with a .058-inch wall (or maybe .065 but it will be tight) and bend it to the full arc of the conduit bender. Next cut it in half the long ways. Attach this to the inside of the conduit bend using double stick tape, panel adhesive, countersunk screws, pop rivets or old chewing gum. Be sure to keep a piece of tube to shim up the hook end of the conduit bender. Now you can bend a smaller diameter tube with the bender. You might want to make a thin little track so that you can hold the tube tightly to the floor in the bender.

A/Is, technicians, mechanics and generally handy builders: You may have heard of this tip before; no doubt that you have many that are even better. Why not share them with the chapter? Send your suggestions to the newsletter editor.

Low Cost Panel Lights

When spec'ing the components for my Zenair 601 HDS project I skipped the internally lit instruments. They were just too expensive for my budget. I planned on using some type of instrument panel lighting but got disappointed when I saw the contenders. We've all seen those "bullet" style lights that mount somewhere in the cockpit and shine on the panel. They looked too old-fashioned and cost too much for what they are. I was looking for some kind of panel light that wasn't too expensive and would

take little or no power. Naturally that means LEDs. Aircraft Spruce has some little post lights with LEDs that looked kinda neat. Unfortunately, at \$30 each the cost adds up quickly, especially when you need 6 or more. I'm too cheap for that, just ask my wife.

One day at work I was given a computer geek accessories catalog, where I found some little LEDs assemblies that are rated for 12 volts. They have three LEDs and a resistor inside a plastic case with computer connectors for only six bucks each. I bought six sets with red LEDs thinking that I would need one per instrument. As a test I connected one to a battery charger and just about blinded myself. They are very bright. One set could light an entire panel.

The LED bulbs in the kit look white but they emit a red light; other colors are available. Their cases can be mounted with two 4-40 screws and nuts, or just do as I did: I glued them into custom-fabricated brackets with RTF silicone goo. I ended up using two sets, one per side, and wired them into an electronic dimmer system. To diffuse the light and make it more even across the panel I lightly sanded one side of some scrap Plexiglas in glued it into the brackets with the same silicone stuff. I took a third set of lights and mounted them on the rear canopy frame tube hoop as an overhead light for map reading. A separate switch controls it. Now the panel has a nice, eerie red glow. Sammy Terry would be proud.

The LED kits weigh much less than an ounce, use only 28 milliamps and are ready for 12 volts. The packaging claims that they last 200,000 hours. Get them from Cyberguys <http://www.cyberguys.com>, part number 161-1465.

Why not experiment with these lights in your project? The cost is low and they really do work well. Better yet, stop by while I'm still finishing the plane and check them out. Bring your sunglasses.

Young Eagles

Now that the EAA's goal of one million Young Eagles has been met what are the plans for the program? More of the same! A kid doesn't care how many others went flying before them; they only want their chance. And when you see the looks on their faces after the flight you'll know why you did it. The look of excitement and joy is something you won't soon forget.

Let's continue to introduce kids to the experience of flight and share our passion for aviation. Hopefully we'll inspire more kids to seek careers in aviation or maybe to just study hard, get good jobs and follow in our footsteps.

EAA Young Eagles Update: By newsletter publication date more than 1,028,000 Young Eagles have taken their first airplane ride.

Sport Pilot Rule in Final Stages

From AOPA and EAA newsletters

On December 23, 2003, Department of Transportation Secretary Norman Mineta signed off on the sport pilot/light-sport aircraft rulemaking package and forwarded it to the White House Office of Management and Budget (OMB). The OMB now has 90 days in which to review and return the package to the FAA, at which time it would be published in the Federal Register as a final rule. OMB only has to decide whether the rule has any negative economic effects.

This is great news, as it completes an important step to make sport pilot/light-sport aircraft a reality," EAA President Tom Poberezny said. "My compliments to FAA and DOT for their hard work in getting this important task accomplished. EAA and the aviation community have been looking forward to this important announcement as the rulemaking package enters its final phase."

The proposal would enable pilots to fly lightweight, low-performance aircraft with a driver's license in lieu of a medical certifi-

cate. "The driver's license medical is a reasonable and safe standard for both sport and recreational flying," said AOPA President Phil Boyer. "Only one-fifth of 1 percent of GA accidents were caused by medical issues, and glider pilots have been flying for years without medical certificates or problems.

Honda Flies Business Jet

Honda Motor Company may soon be a player in the personal business jet market. Honda has recently flown and published specs and performance data on the HondaJet, a clean sheet design equipped with Honda's fuel-efficient HF118 turboprop engines. Honda claims speeds up to 420 kts and a range of 1,100 nm. Imagine departing 2R2 and being in Florida a couple of hours later, no airlines involved (you might have to truck in your own Jet A).

No announcement has been made as to whether or not Honda will bring the jet to market. For more information on the HondaJet see Honda's news release website http://world.honda.com/news/2003/c031216_2.html This is a 7 MB download, complete with photos and movies. Allow plenty of time before clicking this link.

Unfavorable GA News Story Aired

January 15, 2004 - EAA has reacted strongly to the CBS Evening News segment

<http://www.cbsnews.com/stories/2004/01/14/eveningnews/main593216.shtml> aired Wednesday evening (January 14) regarding the lack of security within general aviation, spotlighting residential airparks in particular. "We thought that the CBS Evening News had higher integrity and better news judgment than what they aired as their so-called investigative piece, which lacked balance or even basic fact-checking," said Bob Warner, EAA Executive Vice President, in communications to the network Thursday morning. "CBS completely ignored the security improvements throughout general aviation over the past 30 months and presented a sensationalistic piece that will do nothing to inform its viewers or solve any issues." If any EAA members or other aviation enthusiasts wish to contact CBS about the piece, they may do so at evening@cbsnews.com <<mailto:evening@cbsnews.com>>.

Among the specifics that EAA called to CBS' attention were: More than a dozen direct security improvements have been recommended for general aviation since September 2001, many of which have been adopted; EAA has learned that CBS declined an interview with the Transportation Security Administration (TSA) that outlined the security improvements in GA since 9/11, despite TSA requests for an interview with their agency, which is directly responsible for aviation security, or with aviation groups such as EAA; No apparent contact was made with any aviation organization for background. EAA was not contacted prior to airing of the segment; The only official interviewed was a retired NTSB representative, with no indication to his aviation security knowledge or background; A complete lack of context as to the extremely low security threat posed by GA aircraft when compared with cars, trucks, boats and other forms of transportation; A misguided definition of airparks, which are rarely used for flight training. "Residents of airparks have no more security risk than people who keep cars in garages in residential neighborhoods," Warner said. "In fact, the average SUV or small truck has more payload than a typical general-aviation aircraft. To indicate that small aircraft present a potential threat larger than any other type of transportation is not only wrong, it is an irresponsible scare piece."

Source: Mark Gilmore, EAA Chapter 226

EAA Flight Advisors

People join the EAA and the local chapters for many reasons. Some, to learn how to build or restore and aircraft, some to learn how to fly, for others maybe just the opportunity to hang around

with like-minded people. There are hundreds of reasons to join, and each reason is valid. But once you've gotten that aircraft ready for its maiden voyage, now what? Are you going to make the first flight? Are you current, and familiar with the type you've built? Are you at least a little apprehensive about what you are going to do?

Here's where an EAA Flight Advisor can come in. He/she can help you prepare your flight testing program and see that you are current. They can also give an objective go/nogo opinion when the emotions of your creation's first voyage is at hand.

Do you have the right stuff? We need someone to step up and volunteer as a Flight Advisor. Chapter 1311 currently does not have a Flight Advisor listed (at least the EAA web site says we don't have one). If you are already a Flight Advisor, let the newsletter editor know so that we can list your services.

Centennial Homebuilts Surpass 600

From EAA website home page

When EAA's Aviation Information Services (AIS) developed the EAA Centennial Homebuilts program, it estimated that 500 builders would submit their projects for the special designation, which included a special commemorative data plate for those builders who completed their project between December 17, 2002, and December 31, 2003. That estimate looked to be about right as 2003 wound down ... that is, until December, when a late surge of submissions pushed the overall total well over 600-651 at last count.

"We ran out of data plates and have had to order more of them," said Charlie Becker, AIS Director. "The response has been steady all year, but the late year surge has been tremendous." Becker said many builders indicated they were motivated to complete their projects by the centennial year of powered flight as well as the opportunity to obtain an EAA Centennial Homebuilt Data Plate.

EAA will continue to accept submissions for centennial homebuilt data plates through January 31, 2004. Projects have to have been completed no later than December 31, 2003. Visit the EAA website for more information and to see the collection of projects completed and designated EAA Centennial Homebuilts in 2002-2003.

Gavel Needed

Do you have a gavel that Chapter 1311 can use for the meetings? Even better, do you have some scrap parts we can use to make a unique gavel? How about an old engine valve and rod for the gavel, and a used piston for the striking block? If you can scare up some of these parts or would like to make a gavel out of more "traditional" materials for the chapter please contact Tim LeBaron or Mike Laurenzano.

Editorial Comments Sought

If you have an opinion on any story that appears in the newsletter, or any other aviation-related issue, we want to read about it. We will make editorial space available for your responsible comment. Please contact the newsletter editor at michaelandkatie@tds.net

Upcoming Newsletter Features

Project Reports — We have many active aircraft construction or restoration projects right now; our members would like to know how your project is progressing. The newsletter editor will be contacting you in the coming month or two to find out about the status of your project.

Mystery Solo — A good friend and former member of the Civil Air Patrol suggested a feature that was popular many years ago in several California chapters: Mystery Solo. What they would do is feature a monthly description of a member's first aircraft solo. The identity of the pilot would be kept secret, and the other members would try to guess who they thought it was. They

would then reveal the name at the next meeting or newsletter. If you would like to volunteer your first solo just email a short description of the event to the newsletter editor at michaelandkatie@tds.net. We'll keep it confidential until the meeting.

We need members to participate in one or two of the planned features above, and no previous writing experience is necessary. The newsletter editor will help out with spelling and grammar. Feel free to offer as much information as you are comfortable with sharing. Just type out some notes and email them to the newsletter editor. Note: we may contact you by phone or email for more information on your project.

To download a "printer-friendly PDF copy of the Project Report questionnaire see http://www.eaa1311.org/PDF_files/project_report.pdf

To download a "printer-friendly" PDF copy of the Oshkosh questionnaire see http://www.eaa1311.org/PDF_files/Oshkosh_questionnaire.pdf

Calendar of Events

January 22 - Udvar-Hazy Air & Space Museum at Dulles Airport

March 6 – March Extravaganza for kit builders, Bloomington IN Airport

May 14-16 – Mid-Atlantic Fly-In and Sport Aviation Convention – Lumberton NC

Next Meeting

The next meeting will be Wednesday, February 4, 2004, starting at 6:30 p.m. John Byrum's home and will be chaired by chapter President Tim LeBaron. Program: Bart Ng will be showing and discussing his RV-7A project.

Directions:

Take I-465 north to I-465 east
Exit I-465 north at Michigan Rd (US 421)
Turn left (NNE) on Michigan Rd.
Turn right on Willow Rd.
Turn right on 131st St,
Turn right on Woods Edge Dr.
Turn left on Arborhill Dr.

John Byrum, 11728 Arborhill Drive, Zionsville, IN 46077

If necessary contact Bart Ng on his cell phone 317-374-4929

Get PDF map: http://www.eaa1311.org/PDF_files/Byrum_map.pdf
(will be posted by 1/20/04)

Don't forget to INVITE A GUEST!

On the Radar:

The February meeting will be on Wednesday, February 4 at John Byrum's home. The March meeting will be on Wednesday, March 3 at the Aviation Technology Center. Program TBA.

Chapter 1311 Board of Directors

President — Tim LeBaron
Vice President — Mike Laurenzano
Secretary — Michael Mossman
Treasurer — Vern Sullenger
Director — Glen Matejcek
Director — Dirk Melchior
Director — Paul Vogel

Classified Ads

FOR SALE: Partially completed "Cougar" home-built aircraft. Proceeds to benefit Chapter 1311. Contact any board member to make an offer.

FOR SALE: Custom composite panel flush-mount for Garmin GPS 196 \$75

Contact Larry Rush k9hxt@msn.

FOR SALE: Free firewood to any Chapter member, \$10 a cord for non-chapter members. Trees are down, just cut up and haul away. Location is at Pegasus Farms. Contact Mike Laurenzano at 201-5889 mikelaurenzano@yahoo.com

FOR SALE: (1) RCA Directional Gyro core. Good condition to send in for rebuild. \$100; (1) RCA Attitude Gyro core. Good condition to send in for rebuild. \$100. Contact Gary Reynolds n98gr@aol.com

FOR SALE: Lycoming fuel pump LW154732100. (new) \$215.95 Aircraft Spruce. Sell for \$175. Contact Gary Reynolds n98gr@aol.com

FOR SALE: O-470 engine. Contact Bob Vondersaar bobandteresa78@msn.com for details.

FOR SALE: Inflatable life jackets for over-water flight, only \$5 each! Contact Bob Vondersaar bobandteresa78@msn.com or Tim LeBaron TJLebaron@CS.com. Proceeds benefit Chapter 1311.

FOR SALE: Four sets of very nice Koss headphones. Contact Bob Vondersaar bobandteresa78@msn.com or Michael Mossman michaelandkatie@tds.net for details or to make offer. Proceeds benefit Chapter 1311.

FOR SALE: Three lighted and adjustable "flight desks" for aircraft installation. Contact Bob Vondersaar bobandteresa78@msn.com or Michael Mossman michaelandkatie@tds.net for details or to make offer. Proceeds benefit Chapter 1311.

TIG WELDING: Need custom welding for your project, or for repairs? Contact Tim LeBaron at TJLebaron@CS.com

FOR SALE: Stinson L-5 Landing gear Struts. Contact Kenny Shull 317-539-5542.

2004 Membership Roster

LAST UPDATED December 14, 2003

NAME	EMAIL ADDRESS	PROJECT(S)
BALDWIN, Fred	bladerunnerxz2@netzero.net	2-Place Jet
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CLARK, David	davecpd@iquest.net	1946 Aeronca Chief
CRAWLEY, Dennis	crawley27@aol.com	Grumman Tiger
CUTHBERT, Steve	stepcuth@msn.com	RV-8
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ROEVER, Doug	dmroever@iquest.net	RV-7 Tail kit
RUSH, Larry	k9hxt@msn.com	RV6A, RV-8
SHULL, Kenny	PHONE 317-539-5542	Helping Others
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Tri-Pacer
 Steen Skybolt
 Steen Skybolt
 Brantly helicopter

See our chapter roster online at <http://www.eaa1311.org/member-roster.html>

Did we miss anybody? Please let us know; we'll get it updated right away.

Airplane Spotter

For those of you who want a truly unique, high performance, nearly ready to fly project we spotted the following offering on eBay this past week: WW-II Yak 3 fighter aircraft /Allison powered. Description: "1995 factory Yak 3 aircraft with 120 tt, powered by the Allison V1710 1200 HP aircraft engine, This aircraft has many upgrades installed, such as electric flaps, hydraulic brakes, Model 11 wing and landing gear with a 15 g limit, fuel cells instead of wet wing type system, new thick cockpit glass, Hamilton Standard prop, as well as a large number of new items: Bearcat oil cooler, new type radiator scoop, full swivel tail wheel, Cleveland wheels. Large spare parts package is also included. This airplane is in a project state and can not be flown home right away, it will need the following work: Nose cowling installation, final flight control rigging, engine test cell run and prop assembly. PLEASE CALL FOR DETAILS ON THIS AIRCRAFT, (707) 938-2444. The reason that I am selling this aircraft is that I have a large project in the form of a Curtiss P40 to finish."

By Thursday the bid was at \$175,000 but the reserve had not yet been met. What would it take to truck home this little beauty? Deep pockets and a very understanding spouse.

Quote of the Month

"I was never aware of the propeller pulling me through the air. It was as if I were permitted to glide along beneath the cloud deck through the whim of an invisible force which — like gravity — was certain and eternal and impossible to doubt. No more could I fear falling out of the sky than I could fear falling up off the ground and bumping against the clouds when I'm standing in my backyard." From One Zero Charlie, Adventures in Grass Roots Aviation, by Laurence Gonzales.

January's Program

Dave Clark and Paul Vogel participate in the 50 Flags to Kitty Hawk project.

About four years before the 100th anniversary of the Wright Brothers' historic first flight, Ken Hyde came to the EAA with a proposal to recreate the original flight using a perfect replica of the Wright Flyer. Ultimately spending \$1.2 million dollars, the flight was to occur at Kitty Hawk on December 17, 2004 at the 100th anniversary celebration.

In conjunction with the recreation flight the National Parks Service and EAA came up with an additional project, the 50 Flags to Kitty Hawk.

Dave Clark spied on the EAA's web site an application that one could fill out and send in, giving the applicant an opportunity to represent his/her state by flying their state flag to Kitty Hawk for the anniversary celebration.

Clark didn't think much about the application. "What the heck, I'll never get chosen," but he filled it out anyway. The application was four pages long and had questions like "where you sat in church," Dave commented factiously.

Clark was amazed that he got a letter back stating that he had been chosen. Later, he found out that only ten people in Indiana applied, so he didn't feel like it was that a big of a deal but still was honored to represent the state.

Clark invited Paul Vogel to accompany him on the trip, primari-

ly because the airplane was half Vogel's. Besides that, Dave's "longest" recent cross country flights were to places like Greencastle, Bloomington, and other nearby airports. Paul has about 15,500 hours of flight experience. When asked if he wanted to go he said, "heck, yes, it would be fun."

The original plan was to fly their Piper Tri-Pacer in June to deliver the state flag to Kitty Hawk. Between his insurance company and the EAA's lawyers the plans got continually postponed. He had to send in a copy of his insurance policy and drivers license, current medical, "all of that stuff," to the EAA. He claims that there was a bunch of lawyer talk getting the details coordinated. He finally got the word that they could go in October.

One morning in October Clark and Vogel started out at "oh-dark-thirty" in the morning getting ready to depart. The weather looked pretty bad so they took a 2.5-hour breakfast break in Danville, waiting for the weather to improve. It didn't; the mission was scrubbed.

Another morning they went out to the airport well before sunrise to get ready to go. Paul mentioned that Dave wouldn't be very happy because the airplane had "zero brakes. They pushed the Tri-Pacer back into the hanger and went to get breakfast.

A couple of hours later they went back to the airport, opened up the hangar, dropped the fairings and exposed all of the brake lines. Dave and Paul got underneath, then told Paul to hold on really tight while they pulled on them. They noticed a little drip at one of the fittings. The fitting wasn't very tight and someone had tried to fix it improperly.

Clark remembers from a hydraulics class taught by Vincennes University instructor Gary Zeller that if a hydraulic line leaks and has been properly torqued, sometimes you can tighten it "one more flat" to see if it seals. Dave told Paul to tighten it one more flat. Now it didn't just go drip; it went drip-drip-drip ... Thanks! Somebody had really flattened it all out.

Dave and Paul took the old brake line into the school and asked for help. The professor who was there took them to the tool room. He said they they needed a three-foot piece of quarter-inch aluminum, a small tubing bender, tubing cutter, regular stuff. He unlocked the lab and said "fix it." Dave and Paul bent a sample part from welding rod, and from there fabricated a new piece that came out perfect. After returning to their hangar they installed the new line on the Tri-Pacer. With their re-found brake pressure they can now compress the nose strut; it really holds great.

Finally, on November 20, they made their third attempt. Again getting up at "oh-dark-thirty," they headed to the airport. The weather was favorable and the airplane was in good form. They departed 2R2 and climbed away.

Vogel carried a little non-aviation GPS. As navigator on this leg he punched a few buttons on the device and directed Clark to turn 120 degrees towards Cincinnati. For the next 40 minutes he flew with a hand held up to keep the blinding sun out of his eyes. The weather was extremely bright and clear. The air was smooth until they got south of Cincinnati, then the flight started getting bumpy over Kentucky and Virginia.

Paul did the navigating by that little GPS; they didn't do much talking with air traffic control. They attempted flying over Cincinnati but were given too many instructions so they went way south around it. They were handed off again with more directions so Paul turned off the radio and stayed out of controlled airspace for the rest of the trip. They didn't talk to control again for the rest of the flight, other than while landing.

The two originally planned two fuel stops for the flight east, one in Ohio and one in North Carolina. They were seeing an air-speed of 110-115 miles per hour, but checking the GPS en route Paul noticed that they were realizing a groundspeed of 145 mph, meaning that they had a 35-knot tailwind. Making some quick calculations he commented that they might be able to make it all the way to Kitty Hawk with only one fuel stop.

Dave says that Paul's experience was excellent because not

only did they not get lost (the GPS helped) but it also helped in selecting the airport for a fuel stop. Dave would have chosen a different field for the stop but Paul directed them to Beckley WV. On their way across the mountains they flew at about 5500 MSL to cross peaks that were about 5000 feet high. Paul planned a fuel stop at Beckley, with an elevation of 2800 AGL, rather than a lower airport. He reasoned that they would have less climbing to do to get high enough to cross the next mountains.

After flying two hours and forty-eight minutes they landed at Beckley and took on about 23 gallons of fuel, with a fuel burn of a little more than seven gallons per hour. The pair started out with one good map that Dave kept it in his pocket. Paul says that Dave managed to drop it in the toilet at Beckley. They soon departed and climbed back up to 5500, more than enough to safely cross the mountain peaks that were about 4700 feet.

But a safe crossing altitude wasn't enough for Clark. "It gets a little tense for Uncle Dave. There are no really good landing spots in case something starts to happen," he explained as he showed a photo of the mountainous terrain. "Tim LeBaron said that he learned in the NTSB that there are a lot of good landing spots, just not a lot of them have a happy outcome," Dave said. "It was starting to get pretty bumpy."

Dave said that the winds aloft were horrendous so they crossed the mountains at 5500. If they climbed to 7500 they would have lost all of the tailwind advantage.

At this point Clark talked about what it would be like navigating over the mountains without instruments. Vogel said that when he starting flying he did his training in a Piper Cub. Without instruments except for a compass, all navigation was by pilotage. The first VOR he used was an oscilloscope-type of device with a cathode tube that showed a blip on a circle. This box was installed in a Cessna 120. After that he moved on to some more exotic stuff. Paul says that he remembers paying \$40,000 for a Global or Omega navigation unit. Now he is using a little hand-held GPS that costs about \$135. "It's amazing how navigation has changed," he says.

Clark and Vogel were pleased with how the little GPS did so well. After they returned Dave went to Target and bought one. Paul said "I knew you were going to get one."

Clark and Vogel had to do some over water flying, and Virginia and West Virginia have a lot of flooding. Their final destination, the Outer Banks at North Carolina, was a skinny little strip of islands on the outer edge of the huge bay. Their course directed them to fly 30 miles over water. As he was used to "Hendricks County flying," Dave asked Paul what he thought about going around and staying close to the islands. Paul looked down at the GPS and simply pointed straight ahead.

The GPS was telling them exactly where to go. It pointed them directly to the airport but they couldn't see the runway. As it turns out, they passed right over it; it was hidden by a row of trees.

Clark claims "absolutely" that the plane developed automatic rough over the water, but Vogel says that he didn't detect it.

Prior to the flight, Clark called the Parks Service while making his arrangements. A lady from the Parks Service asked him what type of airplane he would be flying. She said that she was required to warn him that they had only 3000 feet of runway. 3000 feet at nearly sea level would barely be enough for a Piper Tri-Pacer, he joked.

Vogel made most of the landings because Clark spent much of the time taking photos with a little disposable camera. The landing at Kitty Hawk was a severe two-fisted affair because of the nasty crosswind blowing across the trees.

After getting the plane on the ground, they checked in with the Parks Service. They conducted a flag-raising ceremony at a glassed-in area surrounding a Flyer reproduction. The Indiana state flag is now one of the 50 state flags that are on permanent display. Dave and Paul were given a commemorative hardbound book and poster, and had their pictures taken by a professional photographer.

When they took their newly fabricated brake line from Vincennes University, Mr. Griffin, a prof said, "you know, part of your aircraft belongs to Vincennes University. You have to take a sign over there of VU." So they did and took a photo of it at Kitty Hawk, which will be published in the Vincennes newspaper.

Clark and Vogel took the opportunity to look around a bit at Kitty Hawk. Clark commented that when you are on Kill Devil Hill all you can see are the trees. He says that you'd never know that there are so many houses and developments just on the other side. The whole national park is very small.

At the airport there is a little building donated by the AOPA with a lounge area, computers with live weather, and other facilities.

Just as they got to the site the Wright Experience was attempting to fly the Flyer reproduction. When Dave and Paul got done with flag-raising ceremony they walked down to watch another flight attempt. Unfortunately the team couldn't get engine started again. The props were turning but engine just wouldn't run. They waited a little bit and the team tried again, but it wouldn't fly any more that day. They were trying to launch the thing while standing in cold, ankle deep water. The lone flight for the day was about 95 feet; it flew again on December 3.

Dave had tickets to the December 17th festivities and Bed and Breakfast reservations, but said to Paul that he didn't think that he was coming back. While watching the workmen putting up seating he noticed that there was no place to get out of the weather. To see the reenactment the audience would have to go to a Park and Ride, ride a bus either 13 or 15 miles, then get off a walk a long distance. Dave had tickets for the whole week. He was told that if there was any specific thing that someone wanted to see they had to allow four hours on the bus. Dave says he doesn't wait four hours on a bus for anything, so he decided that they weren't going to go. Paul said it was a good decision; they could watch the whole thing on TV.

After the 5.5-hour flight and being bounced around in the air Dave and Paul were tired. Paul looked over at the monument on Kill Devil Hill and said, "do you want to walk over, or don't and say we did?" Dave said "don't, and say we did."

Thinking about the fog that often comes with coastal weather, Paul had another idea. He suggested that they take off that afternoon and fly away from the coast, so when they got ready to leave the next day they wouldn't have to deal with fog. Besides, they didn't have hotel reservations at Kitty Hawk anyway. So they took off to the northeast, swung around and headed back over the 30 miles of water to the next city, which was Elizabeth City, NC. While on the way they saw a dirigible hangar with two blimps that were flying on tethers. Dave said that they looked like the size of the Goodyear, Fuji or Budweiser blimps.

They landed at Elizabeth City, which has a very nice little airport. From there they were given a cab ride by a driver that Dave claims weighed between 650 and 700 pounds. Paul and Dave had to sit on one side of the back seat because the car was all broken down and leaning. After checking in at a Hampton Inn, Dave says that they stayed up way late into the night telling each other what good pilots they were.

The next morning they headed to the airport at 7:30; they were still tired. They couldn't get up for a departure at the break of dawn. Just like the security at Hendricks County Airport, there was no one there when they got to the plane. But the place was never locked up, and there were no alarms.

Next landing was at Lynchburg VA. Looking at the map he noticed that a mountain was 43 miles away; they could see it clearly. They claimed that the air "was absolutely crystal clear and not a puff of clouds anywhere. An incredible day." Looking at a WAC chart while at Lynchburg, they were able to identify another mountain what was 75 miles away.

At Lynchburg VA they checked the oil and noticed a problem on oil dipstick. It had brown goo baked onto stick and the o-ring was missing. They went to maintenance hangar to get o-ring.

Looking at the bunch of mechanics, the oldest looking like he was about 23, Dave asked if they had an o-ring for a dipstick. So the mechanics asked what kind of engine it was. Dave said "O-290D," and no one there knew anything about it. They had "300 maintenance manuals there, nothing on that engine." Dave told them that he was half a mechanic, and had an airframe ticket; he and Paul were both students at Vincennes University. "Can you give me an o-ring that will fit on there. I promise I'll get the right one when I get home." They were given an o-ring and put it on. Dave claims that he promised to replace it; he just didn't say when.

After refueling at Lynchburg Dave and Paul switched seats; a broken seat was bothering Dave's bad back.

During the flight from Lynchburg they were flying along at 6500 feet, with the airspeed indicator showing 110 to 115 mph. While they enjoyed a 30-to-35 kt tailwind on the trip to Kitty Hawk, now they were paying for it with a 30-to-35 kt headwind. Once, while looking at the GPS to read the ground speed, Dave could see that Paul was nodding off, and he noticed that he was doing the same thing. There were times when the GPS was showing ground speeds as low as 70 mph. They were braced for a bumpy ride of the mountains but the plane was rock solid. Every once in a while they had to touch a rudder. The sky was crystal clear and smooth all the way over the mountains until they started to descend.

Dave was happy to get back over flat country where there were many little places to land if they were to have trouble. He says that it started to get hazy when they were out of the mountains.

Originally planning to land at Ashland KY, they diverted to another little airport that was a few miles closer. After running low on fuel, they became worried when the old guy that was there tried three times to pump some gas from two broken pumps. Finally, a lady came out from the office, turned off the pump and turned it back on, and the avgas began to flow. While they were fueling the plane another guy and his wife came out and wanted to buy the airplane. At first they thought that selling it might be a good idea but declined when they thought about getting home.

Finally, they were flying over Indiana. Dave thought "that's the way the world ought to look. No bumps." After 7.5 hours of flying they were home at 2R2. The total round trip took 104 gallons of avgas costing \$279, four pitstops, one night in a hotel, 700-lb. cab driver and countless cups of coffee, yet they were gone for only two days.

Dave reports that all 50 of the pilots participating in the program made it to Kitty Hawk, some making it as late as December 10th. With them arriving on November 20th, Indiana was the 47th state to deliver its flag.

Clark said that they had a good time and he was surprised at how well the 50-year-old airplane ran for the 13-hour trip. "Can you imagine taking off in a Piper Tri-Pacer from Indiana and landing on the east coast by 2:30? For your Uncle Dave that's pretty good. And if we had an RV-8, well ..."