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Experimental Aircraft Association Chapter 33

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Editor: David Koelzer

EAA Chapter 33 Officers

President: Denny Hodge
319 373-3465
dennyhodge@mchsi.com

Vice President: Vacant

Secretary & Newsletter Editor:
David Koelzer
319-373-3257
david.koelzer@mchsi.com

Treasurer: Larry Wood
319-395-9348
elwood140@aol.com

Flight Advisors:
Dave Lammers 319-377-1425

Technical Counselors:
Tom Olson 319-393-5531
Ron White 319-393-6484
Marv Hoppenworth 396-6283

Young Eagles:
John Anderson 319-310-7089
Connie White 319-393-6484

Board of Directors:
Tom Olson
Randy Hartman
Tom Caruthers

www.eaa33.org

N2D goes to Whiteman Air Force Base

By Mark Navratil

Since moving from Iowa to the Kansas City area last year, we have been exploring the area and finding new flying activities to participate in. A couple months ago I heard that Whiteman AFB (KSZL) was going to have their annual open house and air show in mid-September. Whiteman is only a 20 min flight east of Kansas City so I naively sent an e-mail asking if I could fly my aircraft in before the air show and depart at the end of the day when the show was finished. Negative, I was told—Pentagon permission is required to land at Whiteman. Half-jokingly, I sent an e-mail back with a picture of my RV-8A painted in USAF T-6A colors and offered to put it on static display. The next day I received a response from Major Jenn “Wonder” Avery officially inviting me to participate in the show. I had to fill out several forms providing information about me and my aircraft and send in copies of my pilot’s license, N2D’s airworthiness certificate, and insurance policy. Once I received approval to attend the show I was given a PPR (Prior Permission Required) number and instructed to put it on my flight plan and also relay it to the approach controller upon initial contact in order to receive permission to land. It’s been so long since I filed a flight plan (probably haven’t done it since flight training), I had to look up the form online and review the information needed to file one with flight service.

In order to attend the show I was required to arrive on Friday morning, the day prior to the air show, and stay throughout the weekend departing after the show was finished on Sunday evening. I figured I could skip work on Friday and I didn’t have to twist Skyler’s arm to



skip a day of school, so we packed our bags and off we went. Skyler flew most of the flight from the back seat and shortly we were talking to Whiteman Approach and giving him the aforementioned PPR number. The controller asked us what kind of pattern we wanted to fly. I was tempted to request an initial approach with overhead break, but reminded myself that nobody was going to be impressed by my 175 kt approach at a place where military jets regularly enter the pattern at 300 kts or better, shedding white vortices off their wingtips as they pull G in the turn. I humbly accepted a standard rectangular pattern and managed to land uneventfully on the 12,000 foot runway. Holy Cow! That's a long runway. After taxiing for what seemed like forever we were finally directed to park in the center of the static display area--nose to nose with a B-2.



Whiteman AFB is a special place. While it hosts an assortment of interesting aircraft including an A-10 fighter wing, an Apache helicopter battalion and a T-38 training squadron, it is best known as the home to the *only* B-2 Spirit stealth bomber squadron, the 509th Bomb Wing. Only 21 operational B-2's were built (at a cost of approximately \$2.4 billion each when the total program development cost is factored in). One B-2, the Spirit of Kansas, was lost in a take-off accident in Guam in 2008 allegedly due to water contamination in multiple air data sensors. Of the 20 remaining aircraft, one is maintained at Edwards AFB and the rest are assigned to Whiteman, although at any given time only about a dozen B-2's are actually on the field. The rest may be airborne, temporarily located at forward operating bases such as Guam or Diego Garcia, or undergoing extensive maintenance and upgrades elsewhere in the U.S.

After shutting down the engine and making sure the fuel and ignition were turned off, we climbed out of the RV and walked over to look at the B-2. It is an intriguing aircraft to look at both on the ground and in the air. The airframe structure makes extensive use of titanium covered with carbon fiber skins. The four engines are completely out of sight, buried in the airframe and fed by S-shaped inlet ducts to keep the fan blades from reflecting radar signals. The exhaust is mixed with ambient air and dispersed over the top aft portion of the airframe to reduce IR signature. The Air



Force still makes efforts to protect the exhaust system technology and does not park the B-2 in such a way that the back of the aircraft can be photographed by the general public. The bomber looks black, but technically it's a bluish-gray color optimized to blend in against the backdrop of a blue sky. The very large cockpit windows create an illusion that the aircraft is smaller than it really is. Up close, you realize that it's a big airplane--the main landing gear bogeys are derived from the Boeing 767, and each gear door looked to be about the size of one of the wings on the RV.

The B-2 is not aerodynamically stable and depends on fly-by-wire flight control computers to make it controllable. The quadruple redundant computers take in data from an array of flush pressure sensors (there are no protruding pitot tubes or AOA vanes). The aircraft attitude is controlled via an interesting combination of trailing edge surfaces. The "beavertail" is a triangular shaped elevator located on the aircraft centerline between the engine exhaust ducts. Outboard of the engines there are three elevons on each wing which provide both pitch and roll control. The control surfaces nearest the wingtip consist of a split surface, the one on the top deflecting upward and the one on the bottom deflecting downward. Their function is to add drag which the flight control computers use to control yaw and also act as speed brakes for landing, since a flying wing cannot deploy flaps. In cruise they are typically open a few degrees for yaw control, but for maximum stealth in combat they can be closed all the way and differential engine thrust used to provide adequate yaw control. I can only imagine how much fun the flight controls engineers had tweaking all the control laws during development and flight test to get the desired handling qualities perfected!

The B-2 has only two crewmembers, each sitting on a zero-zero ejection seat. Many of the bombing missions to the Middle East have been launched out of Whiteman, so flights may last several dozen hours. The aircraft has enough automation to allow one crewmember to rest on a rollaway cot aft of the cockpit while the other pilot remains at the controls. One B-2 pilot told me that besides being cramped, the worst part about the very long missions is dealing with the very dry air at altitude. An 8 hour flight in an airliner is enough to dry out your eyes and throat, imagine 30 or 40 hours non-stop!



After taking advantage of the opportunity to take some pictures before the air show crowd arrived, we put the control locks on the RV, retrieved our bags, and enjoyed a limo ride to Base Ops where we were given a rental car, directions to a nice hotel in Warrensburg, and meal vouchers for the weekend. We were also invited to join the base personnel and other air show participants for a hangar reception dinner that evening followed by a night air show.

After eating lunch at Base Ops we heard jets outside. We walked out to the ramp and saw that it was the Thunderbirds starting their practice session. They flew their entire air show routine, complete with smoke. The rest of the afternoon was a flurry of activity of base personnel and vendors setting up for the show and new aircraft arriving for static display, interspersed by other aircraft flying their practice routines.



At 6pm we went to the hangar for the dinner. The entire Thunderbird team was there in uniform (pilots and ground crew), plus pilots from the local B-2 and A-10 squadrons, the F-18 demonstration team, the Lima Lima T-34 team, and others. I have never seen such a dense concentration of flight suits in one place. There were several speeches and presentations and then we ate dinner. Afterwards Skyler got his hat autographed by all eight of the Thunderbird pilots and had his picture taken with them. I talked at

length with several of the pilots and it was interesting to hear about what it's like to be part of such an elite team. Several of them commented that while it was an incredible experience, they were looking forward to the season being finished so they could go home to their spouse and young children.

Once it was dark the Lima Lima team put on a nice night air show followed by the Army Golden Knights, who performed their skydiving routine using sparkler canisters attached to their boots. When the show was over the A-10 pilots from the 442nd Fighter Wing invited everyone to come hang out at their bar. Skyler is a bit young to hang out at the bar with a bunch of fighter pilots so we headed to the hotel instead, but based on accounts we heard the next day, it sounds like a good time was had by all and a few pilots probably earned a new call sign in the process.

The next morning we wiped the dew off the RV and waited for the general public to arrive. It didn't take long before N2D was surrounded by a crowd of onlookers. Many people are com-



pletely ignorant to the fact that you can build your own airplane, and most people—including some military personnel—had no idea it was a civilian aircraft. I enjoyed watching people come up to the RV with a quizzical look on their face...you could just see the gears turning in their head, trying to figure it out. “Is this one of those Air Force Academy trainers?” or “Which seat does the instructor sit in?” or “How long has the Air Force been flying these?” or “What do you call this airplane...is it one of those new T-6s?” I dutifully explained over and over that it was a civilian registered kit plane that I built in my garage. “Really?? You built this in your garage? How did you get permission to put ‘Air Force’ on it? Does it fly?”



Another comment I heard repeatedly was about how small the RV is...lots of average-sized people who would fit comfortably in the airplane asked whether two people could really fit into it. Some people questioned whether it was a real airplane. At some point it occurred to me that it's all about context...on the ramp at Whiteman the RV was dwarfed by all the military hardware, so it looked much smaller than it would on a ramp with typical GA spam cans. Possibly for this reason the RV was particularly attractive to children. Throughout most of the show we had a long line of kids waiting to get their picture taken on, in or with the RV. Many of them have never been in a small airplane and it was fun to see them figure out that the stick moves the ailerons. Too bad I can't get Young Eagles credit for static display 'rides'.

Saturday afternoon Kathleen and the girls drove over from Kansas City to join us. The Thunderbirds show got cut short by storms moving into the area and I was given permission to move the RV under an open shelter and tie it down for the night. So I parked it next to a T-38 and tied it down securely. Good thing too, as it rained hard for several hours that night with lightning and hail. Later that evening at the hotel, Maj. Avery called me and said I needed to be back by 7:30 am to move my 'jet' back to its assigned static display position for



the Sunday show. In the Air Force almost every aircraft is called a jet, including the turboprop T-6A.

As requested I arrived early Sunday morning back on base to relocate my jet. The weather improved steadily throughout the day and there was another large crowd around the RV. By the time the Thunderbirds finished their performance, my voice was shot...I had talked to so many people over the volume of aircraft engines and nearby speakers that I was hoarse.

After filing the required military flight plan for departure, Skyler and I performed a very careful and thorough preflight inspection on N2D. Somehow the RV emerged unscathed from the crowds of people who had surrounded it all weekend. We started the engine and began the long taxi north to the end of runway 19. As we neared the runway we saw a B-2 coming in for a touch and go. On a scale of 1-to-10 for Awesomeness, I'm pretty sure a B-2 on short final ranks right up there as one of the coolest things I've ever seen.



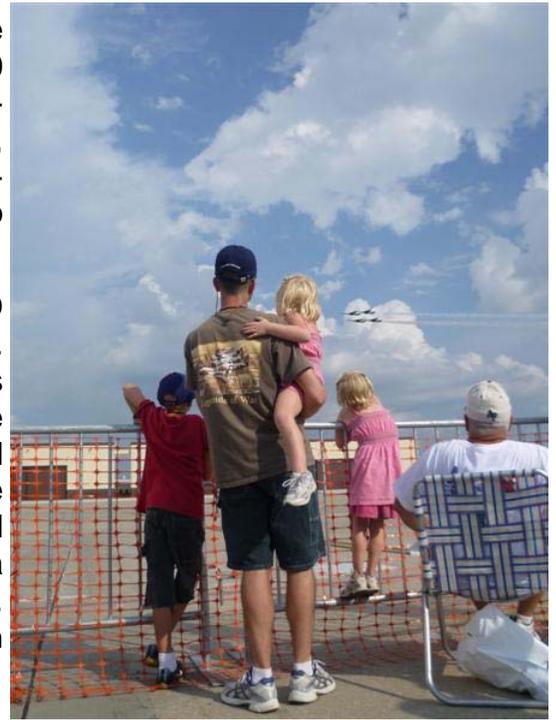
After the B-2 went by there were two F-18's in line ahead of us. The controller gave them 'position and hold' instructions and meanwhile I turned my attention to doing my run-up. Turned off one ignition, check. Turned it back on and turned off the second ignition, and all hell broke loose. The airplane was shaking and making a huge racket. I yanked the throttle back trying to figure out what the heck was wrong and then realized the two F-18's had just gone to full power with the burners lit. I wasn't directly behind them but close enough to feel and hear it resonating throughout the airframe. You don't get that every day while doing your mag check!



Finally we were cleared for take-off. We could not turn west towards home until we flew the whole length of the runway to avoid overflying the B-2 hangars and ramp area. In true RV fashion we lifted off after about a 300' ground roll. As I rotated I noticed two B-2's holding short at the other end of the runway. Not wanting to keep them waiting any

longer than necessary, I opted for speed instead of altitude and used a very shallow climb profile. Did I mention 12,000 feet is a long runway? The controller cleared us for the on-course turn just as we were reaching the end of the runway, so I yanked it into a steep bank right over the top of the B-2's and had a great view of them as we headed west into the sunset.

It took an hour to clean all the greasy fingerprints off N2D after putting her back in the hangar, but it was worth it. Skyler and I had a great time and some unique experiences we'll never forget. We met lots of interesting people and we shared our love of experimental sport aviation with a good portion of the 75,000 air show attendees. We need all the positive interaction we can get with the general public, and I'd encourage others to consider taking your aircraft to a major air show and just spend some time talking to people. You'll reach a lot of folks who will never make it to Oshkosh or the local pancake breakfast. Try it, you'll like it!



From the President's Pen . . .

After another cooler than normal, wetter than normal, summer, we started fall in Iowa with - yep, more rain and cool temperatures. Unfortunately, our events in September fell victim to the foul weather. Being the persistent pilots we are, we've rescheduled the Marion Young Eagles Rally for October 16th, again at the Marion Airport. Our plan, if the weather cooperates, will be to fly from 9 AM to noon and then hold our final family cookout after the event. We'd really appreciate an RSVP if you will be attending the family cookout so that we know how much meat to buy. Don't forget, we have a Young Eagles event on October 9th in Washington, as well.

Due to the change in the September plans, we've also had to alter the remaining schedule for the year. October 8th was originally scheduled to be a regular meeting. That meeting will now be a board meeting only. We've got some discussions that need to take place regarding our BIRTHDAY PARTY!!! That's right; we are officially 50 years old as a chapter on January 9, 2011 (see the official letter below). We will be planning a host of activities for next year to celebrate the event and will be inviting many of you to get involved in the planning and execution of these events. Your participation will be greatly appreciated.

Heading up planning for the 50th Anniversary Gala will be Marv Hoppenworth. He has some wonderful ideas in the works already, so the Gala (tentatively planned for April) will be an event you won't want to miss. Again, Marv will likely be looking for some help with this event, so . . . answer the call when it comes.

9 Jan 1961

John E. Wall
5649 Colorado Dr. S.W.
Cedar Rapids, Iowa

Dear John:

It was a pleasure to read of the formation of another EAA Chapter and I personally wish your group the best of success.

Your group will find times of dispair, but remember it takes strong leaders to keep people working and pulling together for a common cause.

* We are issuing the Cedar Rapids EAA Chapter No. 33. This number is from one of the few chapters who HAVE become inactive and rather than building up a great number of chapter numbers which would not be a true indication of our status, we want to insure that all chapter numbers given are active.

You will receive your charter soon, if you haven't already received it, as well as some other promotional material, from Val Brugger, our chapter correspondent.

Sincerely

Paul H. Poberezny
President

Finally . . . We will plan to do our “fall/winter” banquet in November this year to beat the holiday rush. It may take on a slightly different flavor than previous “banquets,” so stay tuned . . . and open minded. In addition to having a speaker, or some kind of presentation, we will likely have considerable information to share with the chapter about board elections, the 50th anniversary celebration, and a myriad of other topics we are currently discussing. This will be a very important meeting and we'll be looking for as much participation as possible from all our members.

Last Meeting - Rained Out

Sadly the weather did not cooperate for our planned September Marion Young Eagles/Family cook-out. In fact, even the rain-date got rained out! Oh well, better luck next time.

Next Meeting - TWO Young Eagles and a Family Cook-out.

Since the last events were rain out we have decided to double down with two more YE events this month. On Oct 9th, 9 AM till noon at Washington Iowa, we have 45 students of the Aviation Youth Camp signed up to take part.

Then on October 16th, from 9 AM till Noon we will be back at the Marion Airport to hopefully make it up to the kids who got rained out from Sept 18th event. And we will once again tempt the weather gods and hold another family cook-out at Marion. The Chapter will supply burgers, brats and drinks. We ask everyone to bring a side dish or desert. Everyone is welcome even if you can't make the Young Eagles.

As always we need ground crew as well as pilots. So let Connie White, rewhite691@msn.com know if you can help out on either or both days.

Movie Night at the Alexis Park Inn

Our friends at the Alexis Park Inn at the Iowa City Airport hold an Aviation Movie Night every Tuesday. When the weather is good, they have a cookout by the pool prior to the movie, but every Tuesday night there are a variety of snacks and goodies provided by the attendees and the subject of the movie is ALWAYS aviation. If you get there early, they may even fire up the flight simulator and let you do a little flying before the “feature” begins. The movie usually begins about 7:00. Here is the schedule for the next couple of months.

10/5 – Mosquito Squadron
10/12 – Only Angels Have Wings
10/19 – Aviator
10/26 – Command Decision

11/2 – Barnstorming
11/9 – War Lover
11/16 - Von Richthofen & Brown
11/23 – Reach for the Sky
11/30 – Captain of the Clouds

Chapter 33 Calendar

Oct 9, 9am-noon Young Eagles, Aviation Youth Camp at Washington Iowa

Oct 10 10:30am-4:30pm Fall Color Flights. See the city of Oshkosh and the surrounding area ablaze in the colors of the season from the majestic Ford Tri-Motor. The cost is just \$65 for adults and \$55 for children ages 17 and under. For more information and to make reservations please call 920-426-6880.

Oct 16 9am-noon Young Eagles & Family Cook-out, Marion Airport.

Oct 26 6:30pm-8:30pm "What Just Happened" Workshop, WINGS Pilot Proficiency Program Meeting Hosted by: FAA Safety Team & FAA Central Region Runway Safety Program, Ankeny Regional Airport



In October 2010 Issue...

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Experimental Aircraft Association
Alexander M. Lippisch Chapter 33
c/o David Koelzer
2930 Baker Street
Marion, IA 52302
david.koelzer@mchsi.com