Experimental Aircraft Association
Chapter 55
July 2003

Hameed Noon

Meetings are the 2nd Saturday of each Month at the Hangar,
Mason Jewett Field, Breakfast at 0800, Meeting at 0930.

Pres: Mike Arntz 694-4601 Vice Pres: Gary Long 676-3867 Treas: Gregg Cornell 351-1338
Sec: Drew Seguin 332-2601 Editor: Warren Miller 393-9385 Website: www.eaa55.org

Climb and Maintain Flight Level 55

We have four new members join our chapter in the last month. We would like to welcome Eugene Jones, Roy Thelen, and Grant Emfield also a very good friend of mine Larry Benjamin, Larry holds commercial, instrument, and flight instructor's tickets and owns a very nice Cessna 185 which he keeps at skyway. Speaking of our new members, Eugene and Roy helped on Monday June 30th. We were to a few Young Eagles fly that morning. To my surprise when I got to our hangar I saw more than just a few Young Eagles. We flew over 25 kids and we also had six pilots there which two pilots were Roy and Eugene. I called Channel 6 News to see if it would be news worthy and out came our photojournalist and a reporter. The chapter not only received news coverage that day but also the next. Channel 6 has been promoting our rally for July 12th.
A special thanks to Ted Lakin for doing the paper work and pilots Tom Botsford, Ernie Lutz, Bill Purosky and Mary Schwaderer for their time and planes.

I would also like to thank all of the 14 pilots and over 20 ground crew who made our National Young Eagles Day a success. We flew 69 Young Eagles. The Young Eagles rally will be on July 12th Saturday at 11- 4 so that our membership meeting will not be interrupted.

Now for the update on our August B17 Fly In. We have sign up sheets for all the areas of need. We now have the Army Reserves bringing in an army hospital. The Air Force has joined us also. We have for sure participating the B17, C47, warbirds, Army Reserves, Air Force Reserves, Army National Guard, our local National Guard, ultralights, powered parachutes, experimental and general aviation aircraft, Kevin Brennan who was selected to fly our State Flag from Michigan to Kitty Hawk will be attending, Fly Bys, the breakfast and steak lunches, hummers, Hueys, and in the works, F16 fly bys, static displays A-10 and C130, Pitts and N3N Stearman for rides. Diane Byrum will be there to present the State Flag. Senators Garcia and Bernero, Representative Mike Rodgers have been invited.

This Event is getting bigger by the hour folks we need everyone to volunteer for something, even if it's a little bit, a little bit is better than not at all.

I have to share a story with you, while at work on Saturday one of the guys from Northwest stopped by the weather office in Kalamazoo, he is formally from Mason he ask me if I knew anyone who he could go flying with so he could see Mason from the air, I said "I know you can get a ride in August" He responded with "Yeah there is going to be a really big event there in August with all kinds of airplanes and stuff" I smiled and told him the rest of the story. Good day!

If anyone has not signed for t-shirts or polo shirts please do so now. We will be ordering these shortly, if you have not. Please signed up Saturday or if you will not be there call Renee or me at 694-4601.

Remember Take a chapter member with you when you go Flying

Michael Arntz
President, EAA Chapter 55

Teams

July Team

George Moore
Bill Bezdek
Bill DeGrow
Lou Farhood
Paul Barbous
Charles Brown
Jack Toman
Jim McFadden

August Team

Ken Gerow
Gordon Hempstone
Bart Smith
James Downer
Dave Groh
Sam Hines
John Kennedy
Tim Martinson

EAA Board of Directors Meeting

Board of Directors Meeting – May 7, 2003

The meeting was called to order at 7:05 on June 11, 2003. ✈ Attendees were President Mike Arntz, Vice President Gary Long, Treasurer Greg Cornell, Secretary Drew Seguin, Doug Koons, Ernie Lutz, Bill Purosky, Dave Groh, and Debbie Groh ✈ The Treasurer's report was approved ✈ The Secretary's report was approved with the following correction: Terry Fobbs is with the U.S. Army Reserves, not the Michigan National Guard. (my apologies to Terry) ✈ Mile Arntz will get with Stan Chubb regarding a source for replacing the gutters and downspouts on the Chapter 55 Hangar ✈ Mark Jacob has tendered his resignation as Webb Editor due to commitments with his education. We are seeking a volunteer to take over for Mark ✈ There will be a Young Eagles rally on Saturday, June 14 starting at 9:00 am ✈ Centennial of Flight Celebration. There is going to be a lot going on for this event. The Governor may be there. We will have a display form the Army. There will be N3N rides available on Saturday and Sunday, and possibly Pitts rides as well. And of course the B-17 and C-47. We need a P.A. system to use for the three days. ✈ A motion was made and carried to paint the Chapter 55 hangar. Gary Long volunteered to act as coordinator for the project. ✈ A motion was made and carried to replace the picnic tables in front of the hangar with new commercial ones. Doug Koons will run the project. ✈ A motion was made and carried to purchase 4 blinds for the meeting room and a new water heater of larger capacity. ✈ The Great Lakes Fly-in will be held on June 21 at Livingston County Airport. Volunteers are needed.

EAA Chapter 55 Business Meeting

Membership Meeting – May 10, 2003

There was no general membership meeting in June because of the Young Eagles Rally held on June 14.

Notes from Cape Juby

By Terry L. Lutz, Chapter 55 Flight Advisor

It must be summer, because we are close to July 4th, the corn is almost knee-high, the days are actually getting shorter, and Oshkosh is in sight. Late June also means I'll be somewhere across the pond attending an international airworthiness, design, and operations meeting. This year's meeting was right near the center of the old city of Frankfurt, Germany. I won't go over the highlights of the meeting, because the sidelights are much more interesting!

I sat next to a couple of Russian guys, whom I had met a few years earlier in Prague. But I really didn't know them that well, so this year I offered them my business card, just to get a conversation going. It turns out that one of them is a test pilot for Antonov. His card reads: Alexander Halunenko, Chief Pilot, Assistant General Designer, Hero of the Ukraine, and Honored Test Pilot of the USSR!! Mr. Halunenko accomplished the first flight and much of the flight-testing on the An-225. This 6-engine, twin-tailed behemoth was specifically designed by Antonov to carry the Buran space shuttle on its back. The An-225 currently holds the world's heavy lift record, taking off at over 1 million pounds gross takeoff weight.

Speaking of Russians and big Russian airplanes, it was by coincidence that I had just finished reading the book Russian Lindbergh, the Life of Valery Chkalov. In 1937, Valery Chkalov, Georgiy Baidukov, and navigator Alexander Belyakov became the first aviators to fly over the North Pole from Moscow to Vancouver, Washington. They did it in a huge single-engine airplane, the ANT-25. The flight took 63 hours and 16 minutes. They started the trip with 2,094 gallons of fuel, and landed with just 28 gallons remaining. Although the engine performed superbly, they had numerous other problems. Meteorologists at that time estimated the cloud tops of arctic cyclones to be around 15,000 feet. The crew found that the tops were actually around 25,000 feet, so they had to chose between flying in icing conditions, or climbing above the clouds and use up precious oxygen. They ran out of propeller de-icing fluid, oxygen, and it was at times so cold that they couldn't pump oil to the engine oil tank, or water to the radiator tank. Because of earlier Russian flights to the geographic North Pole, navigation was never a real problem.

The goal of Chkalov and the ANT-25 crew was to land in San Francisco, but the weather was bad over the northern Sierra Mountains, so they backtracked for a landing at Portland, Oregon. They had radioed their intentions to a ground station, and when they approached for landing in Portland, the airfield was a sea of people. So they landed instead in Vancouver, Washington at a military airfield on the north side of the Columbia River. Valery Chkalov died in December 1938, while flight-testing the Polikarpov I-180 fighter at the TsAGI Flight Research Facility near Moscow. Look for an example of one of Polikarpov's earlier fighter designs this summer at Oshkosh.

After my meeting in Frankfurt, I took the train about 2 hours south to visit some friends and the Aeroclub Bexbach. The club is doing quite well, and has 3 new airplanes, a C-42 high wing ultralight, a Diamona motor glider, and an elegant ASW-25 two-seat sailplane. I had the chance to fly the Diamona, which has a turbocharged version of the Rotax 914. It has a manifold pressure gauge and a control for the constant speed propeller. I found it rather unusual to see 32 in mp and 2600 rpm on takeoff. Cruise power was 29 in mp and 2400 prop rpm. It is a smooth flying airplane with excellent visibility and good aileron control despite very long wings. The Aeroclub uses the Diamona for glider towing, and has it fitted with a tow cable that can be reeled into the airplane after the glider is released.

Then, I got to fly a very high performance two-place sailplane, the ASW-25. As you can see from the picture, it has 26-meter wings (about 78 feet). What looks like a winglet is really a handle. You just grab the handle and pull out as much wing as you need that day. OK, just kidding, but this thing has really long wings, and a 62:1 glide ratio. The Aeroclub purchased it recently for $170,000, so the instructor and I made sure we didn't scratch any paint!! We departed on a winch launch, which is an

experience in itself. The ground roll is about 50 feet, then you pull the nose up to about 45 degrees nose high and adjust airspeed with aft stick. Target speed was 90 kph, but it was hard to hold anything lower than 100 kph. At about 800 feet agl we had topped out of the climb. I released the cable and immediately entered strong lift. It was that kind of day.

I retracted the gear, and lift of 3-4 meters/sec took us rapidly from 1400' msl to about 4500' msl. All the instruments are marked with the metric system, so my mind was doing a lot of math while my hands did a lot of flying. Unlike older gliders, where you have a 40:1 glide ratio and nothing else to really help in lift conditions except great pilot skill, the ASW-25 has retractable gear, and flaps with 5 different settings. Thermaling is done at around 90 kph (54 mph) with flaps 3-5, and cruise is done at 150 kph (90 mph) with flaps 1 or 2. With flaps 1, the trailing edge flaps are reflexed upward to reduce drag.

I flew from cloud to cloud, sometimes thermaling below them, and at other times just cruising between lift columns. I would cruise at 150 kph, and sensing lift, raise the nose and extend the flaps to maximize the altitude gain while in the lift, then lowering the nose and retracting the flaps again when out of the lift. This is sometimes referred to as "soaring like a dolphin". We flew a triangle with legs of approximately 35 statue miles, and at one time I saw 70 km (42 sm) distance to the airfield. Cloud bases were right about 5000' msl, and we saw several other gliders. After 1 hour and 20 minutes of good clean fun, we threw out all the drag we could and landed, just to give some other pilots a chance to fly such a great sailplane on such a great day.

The Europeans are well ahead of us in some systems. The GPS we used had a download capability, and you could play the flight back in the computer and see just how well you had flown, and critique your mistakes for a better flight the next time out.

From there, I once again visited Airbus in Toulouse to do some flight-testing in the A318, their newest product, and the shortest version of the A320 family of fly-by-wire aircraft. We spent 2 hours discussing the engineering changes made to the airplane, results from flight-testing, and what we would accomplish during the flight. As many of you know, the modern Airbus products are fully protected against stalls, overbank, and overspeed, to name a few. At one point, with the gear and flaps extended, I simulated a terrain avoidance maneuver by pulling the stick full back and full to the left and held it there. Auto thrust brought the airplane up to maximum thrust, pitch stabilized at 25 degrees nose high (at 14 degrees angle of attack) and airspeed was stable at 100 knots in a 20 degree left bank. There was never a feeling of loss of control, or even the hint of stall buffet. A very impressive demonstration.

Equally impressive is STAR, a new facility rising from the French countryside, which will support final assembly of the A380. This new airplane will have two full decks and be larger in length and span than a B747-400. The airplane will be built in sections around Europe, and a specially fitted ship will carry the sections to southern France. It will then be transferred to a barge, and the final journey will be made late at night on a specially constructed highway. Less than 10% of the assembly work will be done in Toulouse, which is a measure of the completeness of the assemblies on arrival. Expect to see press reports on the first flight of this airplane in early 2005.

We had another successful Young Eagles Day June 14th, and have flown several other groups of kids since then, with more to come in July. Your Chapter 55 President and his officers have been doing an exceptional job of preparing for both the Young Eagles flying, and for Mason Aviation Days coming up in August. Mike Arntz wrote a terrific letter to Governor Granholm requesting that she be in Mason to see the state flag depart for Kitty Hawk. If you get the chance, make sure that you thank those doing the planning and all the rest of the hard work. They are doing a super job!!

We've had plenty of good weather to enjoy so far this year, so keep yourself in shape, your airplane in shape, and keep your eyes open for traffic nearby. And as always, give you fellow pilot a hand when they need it.

A Visit to RANS< Inc.

Last September I called RANS, Inc. in Hays, Kansas to ask for information on their S-6S Super Coyote II and S-7 Courier kitplanes. I was amazed to find myself talking with Randy Schlitter, president and chief wizard behind the RANS designs. He explained that his sales guys were at the airport waiting for a ride, so he spent about 20 minutes answering my questions.

The S-6S is a side by side high wing two-seat monoplane with a welded tube frame cockpit and an aluminum tube tail cone which is assembled with stamped plates and aircraft type pop rivets. It

is available as a trike or tail dragger. The S-7 is a tandem high wing two-seat monoplane tail dragger with a welded tube frame. Both use tubular aluminum spars and ribs, which appear simpler to build than wooden construction. They are covered with Superflite Dacron fabric, which is supplied with the kit. Rand said they have found this superior to Stits, which they formerly used. They sometimes had fisheyes in the paint caused by glycol in the Stits fabric.

I asked if their kits were available with the Jabiru 2200 or 3300 engine. "We haven't gotten on that bandwagon yet," Randy said. He cited problems with the early engines; they must run at high rpm's to reach rated horsepower. Installed in a plane they only develop 80% of rated HP. And they must use small props, which are inefficient. Randy likes the Rotax 912 80 HP engine and find they very durable. They have 2000 hours on a tour plane engine. He said the 912S 100 HP engine is ok, but it has a harmonic vibration problem and requires additional construction, which add 6 pounds to it. The kits they supply are complete with mount, cowling and all necessary parts to install the engine. This should save a lot of shopping for miscellaneous parts.

Randy also suggested the quick build kit. This is an assembled airframe, wings and tail feathers which can ever be covered and painted at the factory and still meet the FAA 51% Rule. This would save a lot of build time, but at a considerable premium in cost I asked about the S-7C Courier, the plane they hope to offer in a certificated version. Randy said they are not yet building it as a completed aircraft because it would cost them $500,000 to complete the FAA pro0duction requirements. However, they are offering a builder assist program where you come to the factory, build the plane with their assistance and fly it away
I must have sounded like a good prospect, because they sent me an excellent video and a complete catalog of all the RANS aircraft products which include many Ultra light models.

I appreciated Randy spending the time to answer all my questions and his candid responses. However, I was somewhat disappointed to hear that they were not using the Jabiru engine, which I had seen at Sun 'n Fun last year. They are a purpose designed aircraft engine with direct drive and appear simple and well made. After watching the video and studying the catalog, I was impressed by the attractive RANS designs, their apparent ease of assembly and their success with the Rotax 912 engines. I liked the concept of all aluminum wings and tail feather construction because of its simplicity, ease of assembly and corrosion resistance. I also liked the S-6S Super Coyote II in tricycle version because of its configuration, joysticks and rudder and better suitability for a low time pilot such as myself.

Fortunately, I had the opportunity to drive to Colorado in November with my longtime sky buddy, Dale Crites. I persuaded him to stop in Hays Kansas so I could see the RANS plant and go for a test flight. I called ahead and spoke to Josh Brungardt, Sales Manger. He and a young pilot with 2000 hours who flew Citations, showed us around the plant. It is quite new with very modern offices, much CNC equipment and was very well organized. I was impressed to say the least. I then went to the airport for a flight with Ed Schwad who works in the plant. He is a pilot and CFI. I told him I was still a student with 90 hours because of problems with getting my FAA medical. He put me in the left seat anyway. We flew the white and blue N8086U, which is prominent in the catalog and also appeared in the September 99 "Experimenter" article by Dan Johnson.

We took off with a 12 to 18 knot headwind and the plane literally leapt into the air in less then 200 feet. It climbed out at around 700 feet per minute. It was very maneuverable and we tried a couple of stall, which were almost a nonevent with a wing lever lowering of the nose. Landing was a cinch. Ed said he has flown in 40-knot winds, which isn't unusual in Kansas. Since it is a company demonstration plane, it is a handsome one and the quality was evident throughout. I was satisfied that the 80 HP Rotax (12 provides all the power needed in this 1100 lb Gross aircraft. Flying it was a memorable experience.

Dick Wilke

The breakfast cooks for last months meeting. Dick Wilke, Jim Andrews, Richard Bacon and Barbara Bacon. It was good stuff.

Planes, all clean and shiny waiting to give rides to young eagles.

Young eagles anxiously awaiting their first ride at Chapter 55

--

SUNDAY, JULY 13TH

Don't forget the Chesaning Dawn Patrol on July 13th. This is always a good breakfast and they will have a field full of old planes and stuff.

SATURDAY, JULY 19TH

For those of you who want to take a nice flying trip, go to the FLY-IN WHITEFISH BOIL on Washington Island, Wisc. The Washington Island Lions Club will be serving Whitefish, boiled potatoes and onions with cole slaw, coffee and dessert from 11:30 am to 1:00 pm. Contact Larry Harvell, 920 847-2770 for information. Loran/GPS2P2, N45-23.17 : W086-55.46. Use Green Bay Sectional.